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OSHA OVERSIGHT—WORKER HEALTH AND SAFETY IN THE MANUFACTURE AND USE OF TOXIC AND HAZARDOUS SUBSTANCES

HEARINGS

BEFORE THE

SUBCOMMITTEE ON HEALTH AND SAFETY

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

HEARINGS HELD IN WASHINGTON, DC, ON APRIL 16 AND 25 AND MAY 1 AND 8, 1985

Serial No. 99-32

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OSHA OVERSIGHT—WORKER HEALTH AND SAFETY IN THE MANUFACTURE AND USE OF TOXIC AND HAZARDOUS SUBSTANCES

TUESDAY, APRIL 16, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND SAFETY,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2261, Rayburn House Office Building, Hon. Joseph M. Gaydos (chairman of the subcommittee) presiding.

Present from the Subcommittee on Health and Safety: Representatives Gaydos and Hayes.

Staff present from the Subcommittee on Health and Safety: Sy Holzman, deputy staff director; and Lee Bassford, staff assistant.

Staff present from the Committee on Education and Labor: Dorothy L. Strunk, minority senior legislative associate; and Peter Morgret, minority legislative associate.

Mr. GAYDOS. The hearing will come to order. I ask unanimous consent that my opening statement, as prepared, be inserted into the record, in order to save time, because we do have in the full committee a series of bills that are most important, particularly to our primary witnesses, that are going to be voted on. So, I would like to go into the testimony as soon as possible.

[The opening statement of Hon. Joseph M. Gaydos follows:]

OPENING REMARKS OF HON. JOSEPH M. GAYDOS, CHAIRMAN, SUBCOMMITTEE ON HEALTH AND SAFETY, APRIL 16, 1985

Hazardous and toxic substances are commonplace elements in many work environments and, as we have been made aware by the tragic event in India just a few months ago, the lack of careful controls can lead to alarming consequences.

This is no less true in the workplace itself, where men and women working with these toxic and hazardous substances must consider the prospect of spills and other accidents that could have tragic results.

As most here know, OSHA's hazard communication standard, which is designed to provide information about hazardous and toxic substances in the workplace will become effective in two parts: the first in November 1985 and the second in May, 1986.

There are a number of questions that have been raised about this standard during its long development, such as how effective it will be, whether the focus—limiting it to a narrow range of manufacturing industries—is adequate given the wide use of toxic materials, the impact of the trade secrecy section on providing adequate protection informations, and what the role of individual States will and should be.

Today's hearing, while related to this subcommittee's Hearings of December 12, 1984 and February 19, 1985, which focused on employee health and safety at Union Carbide's Institute, West Virginia, plant where the highly toxic methyl isocyanate is manufactured, continues the efforts of this subcommittee to ensure worker safety

and health in places where toxic and hazardous substances are manufactured and used with a special focus of OSHA's hazard communication standard.

In today's hearing and those scheduled over the next several weeks we will be hearing from union leaders, who represent workers in our factories and plants where many toxic substances are made and used, for their views on the OSHA standard and its expected effectiveness in increasing worker health and safety as well as from industry representatives, including those from the chemical field, for their views.

Worker health and safety is not an issue that can be separated from plant operation. Lost work days due to on-the-job injuries cost money; materials lost in spills and other mishaps are costly; health insurance premiums, as we all know too well, are increasing rapidly.

It is cost efficient to insure that worker are well aware of the hazardous and toxic substances they are handling, that they are trained in dealing with accidental spills, that they are provided with the proper safety equipment to do their job. It is in everyone's best interests.

Before we begin with the testimony, let me make two points. Our witness today is Robert E. Wages, Vice president of the Oil, Chemical and Atomic Workers International Union. Due to a variety of things, Mr. Wages is our only witness.

Also, the full Committee on Education and Labor will begin its meeting shorty. As the full committee will be marking up several bills this morning, it may be necessary to call some brief recesses so members of the subcommittee may vote on those bills.

Mr. GAYDOS. On behalf of the committee let me welcome our witnesses today, Mr. Wages, who is vice president of the Oil, Chemical, and Atomic Workers International Union, and those accompanying him.

Gentlemen, if you please, you may proceed in the manner that would suit the circumstances and your purposes. Welcome, and you do it the way you want to.

STATEMENT OF ROBERT E. WAGES, VICE PRESIDENT, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION

Mr. WAGES. Thank you, Mr. Chairman. Sitting with me is Nolan Hancock, our legislative representative here in Washington.

My name is Robert Wages. I am the vice president of the Oil, Chemical & Atomic Workers International Union based in Denver, CO.

We represent about 120,000 workers in what we could charitably call the high hazards industries in this country, petroleum refining, petroleum exploration and production, chemical manufacturing, pharmaceutical production, and a number of others.

We appreciate very much the opportunity to appear.

I have already submitted a statement, which I do not intend to read from but would like it entered into the record, obviously.

Mr. GAYDOS. Without objection, the statement as submitted will become part of the formal record.

[The prepared statement of Robert E. Wages follows:]

Prepared Statement of Robert E. Wages, Vice President, Oil, Chemical and Atomic Workers International Union

My name is Robert Wages. I am vice-president of the Oil, Chemical and Atomic Workers International Union (OCAW). OCAW represents over 120,000 members working in some of the largest and most hazardous industries in this country. We have more than a decade's experience in bargaining over health and safety issues; we have gone on a nationwide strike over health and safety; and we have done a great deal to extend worker "Right-to-Know" in the area of collective bargaining and otherwise..

Mr. Chairman, members of the Committee, thank you for this opportunity to express a trade union perspective of OSHA's Hazard Communications Standard and industry hazard training programs. You ask for our expectations of the Hazard Communications Standard and its potential impact on working conditions and I can answer you in a phrase: "we have no expectations of this Standard".

In the regulatory arena, we have seen the workers Right-to-Know severely limited during the past five years of an Administration committed to voluntarism and the dismantling of the agency charged with worker health protection.

This is a Standard that has a long history and the current version is one OSHA has put a great deal of energy into promoting. It is a Standard whose shortcomings the labor movement has repeatedly documented in one hearing after another and in every conceivable forum. And it is a standard against which we have filed a lawsuit. Yet OSHA refuses consistently to listen to our legitimate complaints against this Standard, just as OSHA consistently excludes the worker's input into the agency that is set up to protect the worker.

The Hazard Communications Standard has been so important to this Administration because it is important to industry. And both would hope that it will pre-empt the 21 state and more than 25 community Right-to-Know laws. One of the stated purposes of this Standard is "to reduce the cost of complying with state and local Right-to-Know laws".

It is a measure of the labor movement's disillusionment and lack of expectations from OSHA that we have moved to the state and community level for remedies to this Administration's Right-to-Know legislation. We, like the chemical and petroleum industry, also do not want 50 different state plans to deal with. We have traditionally been opposed to state legislation as there is often if not usually a cozy relationship at the state level between government and industry. Cozy relationships between industry and government are the hallmark of this administration. But let me say from the beginning that labor prefers one good federal law that will provide workers with meaningful information on the chemicals with which they work.

The Hazard Communications Standard institutionalizes existing company hazard communicaton programs. The Standard reads that "the employer may rely on an existing Hazard Communication program to comply with these requirements"...

I'd like to remind the Committee that it was just such an existing Hazard Communication program that led to the tragedy of DBCP where over 100 male pesticide workers became sterile and subject to the risk of future cancers. The victims' testimony at OSHA hearings stressed that had proper labels been used, they would have taken precautions to protect themselves. This Standard does nothing to remedy that labeling problem.

The OCAW can speak with some authority about the hazard training programs of some of the largest manufacturing companies in the country. We bargain collectively with three of the five largest companies in the Fortune 500, Exxon, Mobil and Texaco. These companies have had extensive health and safety departments for years: they are well-entrenched programs, and ones that should have a real interest in meaningful training programs.

In 1977, OCAW negotiated a contract clause with the oil industry covering more than 50,000 people in 400 locations on health and safety training. The clause calls for the company to provide at its expense five days of health and safety training to members of the health and safaety committee.

OCAW wanted to set up a training course that would prepare members of the joint labor-management health and safety committees to function as truly joint members of the committee with as much input into the committees as the management members--to give them the tools that would enable them to function as effectively.

Well, that first year, there was such opposition to OCAW setting up a course that we said "all right, we'll go along with industry-selected courses. We only want one option and that is to tape the course." We did tape that first round of five-day training courses offered by the industry and the results were dismaying. OCAW had a group of scientists and public health professionals analyze the tapes and provide a report for us. Their report showed the industry's lack of concern for educating those who were most directly concerned with health and safety in the plant--the health and safety committee members.

Their report concluded that the training provided by the companies was "largely irrelevant to oil refinery hazards (often discussing assembly line problems), was blatantly pro-management in its assumptions, was anti-OSHA, and often incorrect technically." In one session, an instructor actually passed around a vial of benzene so that attendees could smell it.

After this experience, OCAW designed its own course which was particularly aimed at the worker in the plant--the health and safety committee person working on the shop floor. For this reason, we aimed at hazard identification, how to look at the various units of the refinery, what the exposures were and what diseases could result. We also aimed at a course that would reflect a divergence of options. To avoid the charges of bias that had existed in the courses that the industry has previously run, we asked for industry instructors, instructors from the government, NIOSH, the academic and public health community. It is a well-rounded course and has consistently been rated the best of its kind in the country by industry, government and labor attendees.

Yet for all of our attempts at promoting unbiased discussion in a non-adversarial climate, the oil industry has generally boycotted our course. They have favored academic courses that have nothing to do with the real world of the petroleum refinery. They have chosen courses where instruction is still focused on life-style causes of disease rather than on the job exposures. Only one company, Ashland Oil, and some independent refiners have sent their committees to the OCAW school. The others, including most of the major oil companies, even refuse to send instructors. Remember, this training is for joint labor-management health and safety committees. Is there any wonder that we look askance on OSHA's emphasis on promoting voluntary health and safety efforts with the keystone being a joint committee effort. Our experience has been that industry's definition of "joint" is "you agree with what I want to do."

As a further example of how companies neglect opportunities to educate the health and safety committee member, I am attaching the minutes from a monthly health and safety committee meeting. At this meeting there was an inspection of a chemical production unit--the methyl ethyl ketone unit. All of the tour centers around housekeeping. There is no discussion of the chemicals used, their

toxicities, air monitoring and medical exams to detect overexposure. This would seem an ideal time for such a discussion and one scheduled so that everyone on the unit could attend. This would have been meaningful right-to-know education, yet it does not occur.

Even though we have a negotiated contract clause that calls for union health and safety committee members to investigate accidents, there is very little on-site accident investigation going on in chemical plants and oil refineries. The committee discusses a finished report but has no input into the original investigation. Companies simply refuse our input.

In fact, in many instances where we have negotiated health and safety provisions, we have also had to file grievances and take them to arbitration just to get the language enforced. If companies are not educating their health and safety committees, how can OSHA expect they will train other employees?

OSHA is not naive in putting its faith in company voluntary safety efforts. OSHA knows history--that it was the failure of the voluntary safety movement that led to the passage of OSHA in the first place. Or perhaps there is a certain blind spot in the Administration's ability to see reality. In that case, I suggest that Mr. Rowland and other top OSHA administrators spend a week with health and safety committee members at chemical plants and refineries across the country. The OCAW will be happy to try to arrange an itinerary for them. I extend an invitation now.

In its promotion of voluntarism, OSHA has rendered itself impotent and taken away a large incentive for industry to maintain safe and healthful working conditions and that is a working law that requires the employer to do so. I'm not trying to say that industry is consciously evil and wants to harm employees but we do submit that health and safety suffers from benign neglect in the workplace. It's not people at all--it is the system that makes profitability not public

health the bottom line. In a continuous process industry which employs most of our members, it's the equipment that counts, that's where the capital goes and it is the worker who is expendable. In a modern oil refinery it is normal to find 20 workers operating $200 million in process equipment on a given work shift. That's $2,000 in wages versus $200 million in capital. So from the point of view of bottom line economics, it's the equipment that counts, not the worker. And if you can't make it on the job today, there are a 1,000 hungry jobless that will gladly take your place. In today's climate where companies feel more and more pressure to increase profits, to squeeze out profits, I should say, there is going to be a neglect of health-related maintenance procedures. That's why we need more than ever a stong law, a law that for example, requires regular turnarounds at petroleum refineries and lays out requirements for what will be done, a Standard that, by the way was promised back in 1980.

I would like to briefly look at some of the other key provisions of this Standard as a way of demonstrating our reservations about its ability to meaningfully impact either the workers' Right-to-Know or working conditions.

Hazard Determination. Aside from some 2,000 chemicals, OSHA leaves the determination of hazards up to the employer. The regulation does not require employers to inform workers about chemicals which are not hazardous in their "professional judgment". Based on our historical experience, I think I can predict with some certainty that employers are not going to be aggressive in uncovering hazards. If the past is predictive of the present, the employer's posture will be reactive rather than active. I would like to describe a couple of situations which illustrate the reactive attitude of management.

In 1979-1980 the OCAW along with the National Cancer Institute discovered an excess risk of brain and stomach cancers among groups of Texas oil workers. We needed more death certificates to further establish this risk. We went to the

companies involved and asked their cooperation in getting retiree death certificates. They refused to cooperate with us. Instead, they went out and hired their own epidemiologists to try and counter the studies conducted by the National Cancer Institute. What they did was to practice what is called in the field "the dilution effect". They studied all the refinery personnel, secretaries, white-collar workers, engineers, many of them not at risk of exposure. The result was they found no significant risk.

A second situation arose about a year and a half ago. Members of the bargaining unit at one of our petrochemical complexes felt there was an excess of miscarriages among the membership in one unit. They voiced their concerns to management through the health and safety committee. Management's response was that the Union would have to give them further evidence to back up their claim. Management was not interested in investigating further.

Small wonder that we are a little skeptical about management's willingness to share chemical information. History suggests that there has to be a large number of fatilities before action is taken.

Material Safety Data Sheets are the focus of this Standard, rather than labeling. While the Standard does require the material safety data sheets to be in the work area, there are few workers, especially today, who will have the time to consult these sheets. Most of our members are doing the work of at least two other people in these days of job combinations and workforce reductions. And who can afford the time to look up a Material Safety Data Sheet when there is a leak or process problem and you are an operator at a continuous process plant.

Further, the information contained in Material Safety Data Sheets still has serious deficiencies, with chronic effects of exposure still not adequately documented. I am attaching one such sheet dealing with cobalt, which can cause serious lung disease. as well as heart problems. On the sheet, there is no discussion of respiratory problems, only of avoiding skin contact.

The section on trade secrets could only have been written with a view towards discouraging the worker from using the Standard. First of all, for any substance the employer deems a trade secret, only a health professional may request a specific chemical identity, and then within certain narrowly defined limits. For example, only a doctor can request alleged trade secret information in both emergency and non-emergency situations. The trade secret provisions will seriously weaken the ability of a worker (or his representative's) ability to challenge a trade secret designation. Secondly, the Standard allows confidentiality agreements which include "stipulation of a reasonable pre-estimate of likely damages," and contains the ominous statement that, "nothing in this Standard is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law."

In conclusion, I would say that OSHA has completely abdicated its responsibility for worker safety and health, not only in this area, but in general. OSHA has failed abysmally in its mandate to "assure so far as possible every working man and woman in the nation safe and healthful working conditions."

OSHA has ignored 80% of the workforce in this Hazard Communications Standard.

In other areas, they have ignored the pleas of workers and their representatives for more protection against the hazards of cancer-causing chemicals like benzene. Benzene is a substance that, at current permissible exposure levels, causes 30 times an increased risk of cancer according to OSHA's own research arm, NIOSH. Labor has had to file suit after our petition for an

emergency temporary benzene standard was stalled and subjected to the usual foot-dragging tactics of this Administration. After a year and a half we are still waiting for a benzene standard. The same goes for formaldehyde, ethylene oxide, asbestos and 1, 3-butadiene. If I were completely cynical, I would for once agree with the Heritage Foundation and say, "yes, why not abolish OSHA." That would at least be honest since the agency only exists as window-dressing today.

But I am not cynical and I can assure you that OCAW and the entire labor and public health community will continue to fight back against the selling out of worker protections. We will continue to seek forums such as this one, where we can at least assure that someone is listening and, we hope, acting.

We will continue our struggle to make the worker's voice heard in the regulatory arena, the collective bargaining arena and, most importantly today, the arena of public opinion. I can promise you that workers, invisible Americans in this Administration, will once again become visible and their voices heard.

To conclude, I urge that this Standard be returned to OSHA for extensive rewriting. Specifically, the standard should be broadened to cover the 80% of the workforce now excluded from coverage. This includes workers in the construction industry, transportation, hospital work and the service industries. This would serve to begin the process of making more of the workforce of hazards, and require more than just chemical manufacturers and importers to come under the requirements of the Standard.

In revising the standard, I would expand the mandatory list of substances covered to include those listed in the NIOSH Registry of Toxic Substances. While hazard information is incomplete for many of these chemicals, and indeed most chemicals in commerce, it offers a start towards a comprehensive list of hazardous chemicals. Who knows what chemicals judged harmless today turn out to be the

vinyl chlorides of tomorrow. Toxicity testing is not conducted for the majority of new chemicals introduced into commerce, according to the EPA.

Making labels the focus rather than material safety data sheets would go far towards increasing our expectations of this standard. As explained previously, the average worker does not have the time nor the luxury of checking material safety data sheets, particularly when he or she is involved in a leak or process problem and monitoring control panels. Exact chemical identities and appropriate hazard warnings on labels will do far more to make more workers aware of hazards than a box or volume of material safety data sheets. Labels offer instant education and don't require time and effort that is not available.

The trade secrecy section should be changed so that chemcial identities are more accessible to workers and that employers do not have carte blanche in what constitutes a trade secret.

Together, these changes will increase workers awareness of hazards, improve the employers hazard communication efforts and make the Hazard Communication Standard a real means of identifying hazards in the workplace.

JOINT HEALTH AND SAFETY COMMITTEE - _____ REFINERY

MINUTES OF MEETING - MARCH 13, 1985

UNION REPRESENTATIVES

( )

MANAGEMENT REPRESENTATIVES

(for)

We had a lost work day injury on February 15, 1985. A Pipefitter was over-exposed to ammonia when he and another Pipefitter were removing a 2" valve for replacement. The line was thought to have been depressured but there was a substantial amount of ammonia when the flange was loosened. The Pipefitter was off work about ten days, mostly due to irritation of his eyes. The investigation will be finished soon.

There has been a change in Management Representatives for the Committee.
 has replaced has replaced

OLD BUSINESS

1. Discussed the walkaround inspection of MEK in February:
   - o Housekeeping on unit was very good.
   - o Tank Truck Loading Rack - ground wires and electric plugs on northeast corner need repairs or removing.
   - o Some steam tracing needs insulation for personnel protection.
2. Seals on #2 Deprop reflux pump at BRU was redesigned.
3. Cooling tower chemicals should be handled and dispersed properly in the future.

NEW BUSINESS

1. Discussed leaks on asphalt pump at 535 Still. Management will investigate. Operations Management representative will handle.

_____
, Co-Chairman

_____
Co-Chairman

BFB:nm
3/14/85

ARI-100 REAGENT

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: ARI INTERNATIONAL	EMERGENCY TELEPHONE NO.: (312) 359-7810
ADDRESS (Number, Street, City, State, and ZIP Code): 600 North First Bank Drive, Palatine, Illinois 60067	
CHEMICAL NAME AND SYNONYMS: ARI-100 Catalytic Reagent	TRADE NAME AND SYNONYMS
CHEMICAL FAMILY	FORMULA: Confidential

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS: organo-metallic cobalt			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Not Relevant		

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	NA	SPECIFIC GRAVITY (H_2O=1)	.897
VAPOR PRESSURE (mm Hg.)	NA	PERCENT, VOLATILE BY VOLUME (%)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (_____=1)	NA
SOLUBILITY IN WATER	soluble		
APPEARANCE AND ODOR	Dark Blue, None		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): Not Relevant	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES: Non-Flammable - Non Explosive			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

NONE - Skin contact area, if moist, will temporarily dye blue by this colorant

EMERGENCY AND FIRST AID PROCEDURES

Wash with water

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE		

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

NONE

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Collect, then flush area with water and/or bleach

WASTE DISPOSAL METHOD

Readily disposable by all methods

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Filter mask

VENTILATION	LOCAL EXHAUST if available	SPECIAL
	MECHANICAL (General)	OTHER

PROTECTIVE GLOVES Rubber | EYE PROTECTION

OTHER PROTECTIVE EQUIPMENT As with all chemicals, avoid skin contact. Wash contact area.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING This material is a strong colorant. Keep containers closed and work area clean.

OTHER PRECAUTIONS

Mr. WAGES. Thank you, Mr. Chairman.

I would like to confine my oral remarks to drawing particular focus to certain questions which have been raised by the committee, and in particular try to focus the particular written statements which have already been submitted that will perhaps clarify some of what our intentions are with regard to the testimony on the subject matter.

Our written statement is submitted in very noncompromising terms and is intended to portray our stark astonishment at the intentional, calloused, reckless disregard for job safety and health systematically undertaken by this administration, and, unfortunately, it appears condoned by Congress.

While we specifically focus in our testimony and will in our comments today on the hazard communication standard, please understand that that is not the only burning ember in the dry forest. There are many others.

We feel, as an organization, and I feel in particularly as a lawyer who started this fight some 10 years ago, very strong about a worker's right to know, right to know what chemicals he is exposed to and a right to know what the chronic or acute effects might be.

Not only that, we feel very strongly about a community's right to know what kind of chemicals are in the community and what the potential impact of those chemicals might be on the population.

We have been in this struggle for a long time and we are not ready to retreat. And what we see in the hazard communication standard is a clear sign of retreat.

The strength of our feelings has been molded by one very simple reality. That is, that the stuff our people work with hurt them, pure and simple. Benzene, ethylene oxide, formaldehyde, you can go right on down the list.

I worked in an oil refinery for a number of years. We used to wash our hands in benzene solvents, wash our hands, our tools. You treated it just like washwater. We were never told, although the industry knew, what the potential impact of that chemical was.

In the chairman's letter to OCAW, specific questions were raised and I would like to focus my attention on those specific questions.

One, apparently there was prior testimony that indicated that many chemical manufacturers are approaching compliance with the hazard communication standard.

Two, the inquiry was made as to the degree of awareness of workers and the efforts of employers to notify workers of hazards in the workplace.

Three, what kind of efforts are being made to pass along information with regard to toxicity and information such as that to workers?

I would like to address that, one by one. But the ultimate question posed is what are our expectations with regard to the hazard communication standard. And I can tell you quite candidly and quite up front, we don't have any expectations at all.

With regard to whether or not chemical manufacturers are approaching compliance, as apparently some people have said, we don't find that very surprising. It is not any wonder that chemical manufacturers and many users could approach complying with the

standard as it exists right now, because the standard essentially offers the status quo.

It has a lot of fancy words in it, a lot of directives, a lot of noble ideas. But I don't too often look at all those noble objectives and noble purposes. I look at the exceptions to the rule and I look at what defenses are raised by an employer to avoid an obligation. And this particular standard is fraught with the typical excuses and exceptions, trade secret provisions, the use of professional judgment by an employer or employer's staff in order to determine what a hazard really is.

So, I would suggest that because of the breadth of the definitions and the breadth of the exceptions to the general rule, I would suspect that many chemical manufacturers would find it very easy to comply with the standard as it exists right now.

When we talk about the extent to which workers are aware and are being made aware by employers, I would say that over the past few years things have dramatically changed in the workplace.

We are far more informed now than we were 15 years ago. I just don't think it goes far enough.

In the last few years there has been an effort, particularly on the part of the industrial trade union movement, to secure information. Now, we have had to litigate for it most of the time, we have had to go to the National Labor Relations Board, or to the Occupational Safety and Health Administration, or, unfortunately, through some kind of toxic tort litigation to find out what is going on in the plants. But we do slowly but surely find out what is going on.

OCAW started this inquiry back in 1976 and 1977 when we developed a very standard letter to present to employers requesting the generic names of chemicals.

I would like to cite one particular case that I was directly involved in to show you that some of the exceptions presented in the hazard communication standard as it presently exists is going to have, I think, a dramatic effect on how much a worker is able to find out.

Ninety percent of the chemicals in use in this particular facility was listed by the employer as being proprietary, confidential or otherwise a trade secret. Ninety percent of every chemical substance in the plant.

I don't see anything in this standard that is going to prevent the same exception. Of course, the standard gives us the opportunity to litigate it. We don't want the opportunity to litigate. We want the opportunity to find out what we are working with.

We don't believe substantively our history and our practices with regard to acquiring information are going to change at all under this hazard communication standard. And we don't believe that this administration is going to be interested in enforcing it, in any event.

There is a presumption in this standard, when you look at the trade secrets provision of the standard, there is a presumption that a worker, when he tries to find out what he is working with, has an interest adverse to the employer.

The statute creates that presumption. I have suggested on more than one occasion in more than one forum that this is an errone-

ous presumption to make, that at a minimum there ought to be a balancing of interests.

There ought to have to be a compelling reason for nondisclosure under the trade secret provision. But indeed, this standard creates a presumption that anything that is claimed to be a trade secret and can be tangentially supported as a trade secret can be withheld in terms of information.

Now, there is the exception to the rule with respect to a medical emergency. If I am ever in a hospital or my workers are ever in a hospital and they have been exposed to a chemical, and you have got to go through the rigamarole of calling somebody and getting corporate clearance to give them information, I think that is indicative of the sad state of affairs. And I would hope that somebody in their wisdom would revisit that particular issue with some degree of sincerity.

The last question that was raised has to do with what kind of efforts are made to pass along information on toxicity to workers.

Well, not much. And we don't think that much will be done under the standard, and there are some very good reasons, I think.

Chemical manufacturers are not inclined, nor, I suppose, if I were in their position, would I be inclined, to give too much information on toxicity considering the present state of affairs of toxic tort litigation.

We don't expect them to do it out of benevolence and we don't expect them to do it over some compelling sense of volunteerism, because this administration decided to say let's all comply, and that somehow out of some patriotic duty people are going to comply.

We think there is a natural tendency among chemical manufacturers and chemical users not to provide complete information with regard to toxicity, particularly as that relates to long term effects of exposure.

I would remind the committee, as I have tried to remind OSHA, in years ago people could say, well, working around formaldehyde may not be a long term problem. We now know it is.

Like I said a few minutes ago, I used to wash my hands in benzene based solvents, and the list goes on.

Our problems today are problems due to exposures 10, 15 years ago, and to create a fiction that automatically there should be or there should not be some way to exercise this professional judgment by employers to determine a hazard is somewhat ridiculous, because it is the chemicals that are unknown that we are working with today that are going to cause the occupational cancers and the problems 20 years from now.

So, whatever we do within the hazard communication standard or within any regulatory arena has to be undertaken with the broad notion that there has to be a commitment on the part of the Federal Government to ensure that chemicals put into commerce are examined and studied for a long period of time, and it can't be done by in-house professional people within corporations.

It is the old story, and it is true, and I don't care who disagrees with it, statistics don't lie, statisticians do. And I believe that.

What are the major flaws, as we see them?

One is the focus on the use of material safety data sheets. One could read the standard and come to the conclusion very easily that if an employer makes available material safety data sheets out in the workplace, he is in compliance. One could make that argument, particularly if that is the employer's existing hazard communication program. At least if I were an employer's attorney, I would sure as hell make that argument.

I would suggest that—and I have attached a material safety data sheet to my written testimony, and you look at that, and you will see the chemical cobalt, a chemical which has long-term lung disease problems, long-term heart disease problems. Nothing is mentioned on there, the material safety data sheet, of those long-term chronic effects. Nor is there any requirement that those long-term effects be listed, even if there are powerful suspicions or even if there is proof.

Consequently, there is a fatal flaw in the use of material safety data sheets.

While a lot of physical characteristics are given, oftentimes the information that a person most wants isn't given, and that is, if I breathe this very long what is it going to do to my lungs, or is there potential that I am at increased risk for cancer. Those you will rarely find on material safety data sheets.

The notion of a self enforcing standard, which this essentially is in the promotion of volunteerism and patriotism and all that other stuff, I have to submit to the committee, and I think anyone else who has been in the occupational safety and health field for any length of time, that that is just pure balderdash.

The reason that we saw OSHA passed to begin with was that employers generally have not taken and assumed the responsibility to protect the safety and health of workers, and I don't see any tremendous change in spirit in corporate America toward rectifying that.

The determination of what a hazard is presents a particular problem with this standard.

When we start talking about employers and their people being able to use their professional judgment, it is going to be then a question of who is paying who to do what.

In the scientific community, as we all know, there always is room for argument and anyone active in the standards-setting arena over the last 10 years can appreciate the fact that we have gone through thousands of those arguments as to what a hazard is and what it isn't.

Christ, there are people working in the oil industry right now that think 10-parts-per-million exposure to benzene is acceptable. And virtually every scientific document that has been printed on the subject indicates otherwise.

So, there is room to differ. The question is, "Who ought to really make the determination?" Should we say, "Let's leave it to a good faith effort and the exercise of professional judgment by chemical manufacturers and chemical users?" And I have to suggest that that is the wrong response.

In our written testimony we have suggested that the chemicals that ought to be included as hazardous be expanded consistent with the NIOSH registry.

The coverage of this standard, if I were the Assistant Secretary of Labor, I would be embarrassed at putting a standard out which *literally leaves out millions of employees, literally millions: the* construction, the service trades industry, and many others.

I work right alongside in a refinery with hundreds of construction workers. Are they excluded? Well, on the face of this statute they are, on the face of the regulation they are.

People in the service industry, can we assume they are not exposed to chemicals? Ask the hospital workers. I am not too sure.

But I would have to argue that they are at risk and they are exposed.

And the last problem we have with the regulation, it is a problem I have mentioned several times in my testimony this morning, is the sweeping trade secret provision.

I think that is absolutely inexcusable. I have to suggest to the committee that my passion in this field is probably generated from the fact that I have spent a good part of my adult life working in the trade union movement and in particular issues involving health and safety, as a litigator, as a policymaker, and I am very disturbed that we are confronted with an administration that seems to have sold health and safety lock, stock, and proverbial barrel to the bosses. It is upsetting, and it is disturbing.

The law of the land has been, and when the Congress enacted the Occupational Safety and Health Act in 1970, was designed to assure so far as possible every working man and woman in the Nation safe and healthful working conditions, and it is a shame to think that it has been amended by administrative fiat to include, "so long as the companies agree."

Thank you very much, Mr. Chairman. I appreciate the time.

Mr. HANCOCK. I have no statement to make.

Mr. GAYDOS. On behalf of the committee, let me thank you. I think you just drove right into the points that are so sensitive, and I just wish we had a larger audience to hear you.

It is not a sexy subject matter, I imagine, for the American people, as the number of people that are here shows.

The committee has been perplexed as to how we are going to generate interest nationally. Outside of some of our labor leaders, there are very few people that are willing and able to make such a fine analysis, and I know that you, in order to accommodate the committee in our very busy schedule, cut your remarks short.

And I would have to say to you, my good friend, that it is just a shame and if we had a larger audience I just wouldn't go up there and vote on those bills. I would just go into detail on every one of your statements.

I mean it without equivocation. We are just finding ourselves in a position with an administration that is so reluctant, we as a committee find it difficult, if not impossible, to take anything to the floor under these circumstances. It is an unsensitive and unresponsive administration as to the whole concept.

I happen to have been here when OSHA was originally passed and fabricated, with the help of a lot of people here in Washington and throughout the Nation.

I don't know what to add to what you have said, to be very frank with you, but I do have a couple of questions that I would like to propound to you.

Maybe before I do, my good friend, Mr. Hayes, is here from Chicago, and if anyone knows—and I repeat that, if anyone knows some of the problems involved in this specific subject matter, it is Mr. Hayes. He has spent a lifetime with it.

So, at this time I will turn it over to my good friend and colleague, Mr. Hayes.

Mr. HAYES. Mr. Chairman, I got here a little late, as you know, and the views expressed by you in response to what I have to agree was expert testimony—no better testimony can you get except from one who has experienced the hazards of industry, particularly as it relates to the one represented by the Oil & Chemical Workers Union. And I think in summation or what I understood you to say, that the Government has pretty much aligned itself with industry.

Mr. WAGES. That is it in a nutshell.

Mr. HAYES. That is right, and totally unresponsive to the pleadings of people who work in hazardous industries, such as so many members of the Oil & Chemical Workers Union.

I think you are right, Mr. Chairman. This is true in other situations. OSHA, as an entity, to preserve the safety of the working people, is being relegated to almost a meaningless kind of agency.

Unless we do something about it, this is going to continue to be the situation, and I certainly, as one Congressman, am willing to do all I can to vote for the protection of the worker. Men and women workers are, to me, more important than profits, but this is usually the measuring stick that they operate by, with little regard. So you kill one worker, you can always get another one, that is, unfortunately, a crude and crass way to put it, but you must draw those conclusions when you see such little regard for the safety of human beings.

Thank you, Mr. Chairman.

Mr. GAYDOS. Thank you.

I remember this room, how packed it was when we passed the act and how much pressure we had on us, and I remember the long hours that we spent, all night, 3 or 4 o'clock in the morning. And my predecessors in this seat—we have some good friends in the audience over here—John Dent, who is not with us anymore, he was right in the middle of it, along with Mr. Daniels from New Jersey. Just what a big difference.

And I can even understand the differences of philosophy, you know, of the present administration, where there are some differences. You have a different administration, they have their own thinking. But there are some fundamental glaring deficiencies in some of these standards which no man, no reasonable person could misinterpret.

It is very clear that it is designed to inhibit, it is designed not to include. As you very, I think, properly point out as to the numbers of workers, it specifically excluded service employees.

You know, there is no question about it, all those dishwashing detergents they are using and the length of the use and the method that they are using them—and we go back in the hospitals with formaldehyde and all those things, and it is all considered safe.

And I probably speak with some background because I live around—oh, as a crow flies, around 1 mile or 2 miles from the biggest chemical plant in the world, and that is located in Claireton, PA. It is a coke plant. They make benzene there and anhydrous ammonia. And it is a cracking plant, biggest in the world. Even West Germany doesn't have that size of a plant.

And I am familiar with all of the philosophy and all the explanations given over the years as to benzene and it is not going to hurt you, in tar and the derivatives in the smoke and the quenching plants that came, all that stuff and all the years of argument, all my lifetime.

And then we passed OSHA some 15 years ago or so, and I thought maybe it was going to be solved that now we were making a reasonable approach on it. But apparently we are back in the soup again because we are not getting too much for the dollars spent.

And I think that it is encumbent upon us to make sure that we don't let this thing rest.

I am going to be, again, very specific with you. We are trying to devise some type of way or means or procedure or methodology, do something to focus on this problem again, and we are going to need your help desperately.

But until we can fill this hearing room up, I guess we are destined to live along and complain and fight and scratch and hopefully try to affect something.

Mr. WAGES. I would like to just make an observation. I spent an extraordinary amount of time talking to rank and file workers and it would be a mistake to think that safety and health on the job is not an important issue.

Anybody in this administration or out of it that thinks it is not an important issue is missing the bet.

There are other issues and perhaps priorities aren't as focused as well now, when oil workers in particular helped fill this committee room on more than one occasion, on more than one occasion during the debates around the 1970 act, now are scared to death out there generally whether or not they are going to have a job.

Occupational cancer becomes important, but it becomes important 20 years from now. Their job next week is important to them.

So, let's not confuse what may seem to be a change in priorities out there with what really it is; working men and women generally, particularly in the industrial sector in this country, are scared and they are scared of losing their jobs. And it is difficult for them to put priorities on some other matters. But it is an issue to them.

The level of activity with this administration is not as high in terms of enforcement activity, complaints being filed, because people are just tired of spending the postage and the time to file them, when nothing happens.

So, it is not the fact that there is not interest. Our health and safety committees out in the field and in the plants are more active today than they have ever been. We have tried to change our focus to deal in the collective bargaining arena and to deal in the courts, where necessary, in order to redress our health and safety problems.

And I have a confession to make, Mr. Chairman. When this administration took over in 1980, I was the architect—and I have to apologize now, but I was—of a spirit of some attempt at cooperation with this administration.

I am a political realist. I know what happened in 1980 and again in 1984. I don't need somebody to hit me with a 2 by 4. I sit there and watch Dan Rather and everybody on television, the same as everybody else does. I see all these landslides.

So, I made a serious, honest effort to try to cooperate with the people that the President put in power in the Department of Labor, and particularly the Assistant Secretary of Labor for Occupational Safety and Health, at that time Mr. Auchter, and got a lot of lipservice out of it and that is it.

We tried. We tried that route. Now we focus our fights in the collective bargaining arena and in the courts, and we will continue to do that because the political winds have changed. Just as they blew in a frosty October in 1980 and 1984, will blow in another change some other time.

Mr. HAYES. Mr. Chairman, may we just raise one question?

Mr. GAYDOS. Yes, go ahead.

Mr. HAYES. As you were talking I was reminded of the catastrophic situation that developed in that plant south of Chicago at Joliette, IL. And the question I want to raise is, when investigating the causes of that explosion, which you know killed several people, it seems to me that the agencies assigned to do the investigating tried to cover up, rather than investigate.

What can we do to make sure that these agencies that are assigned to investigate, if they can't avoid certain catastrophies, at least investigate it to at least come up with the kind of cure that might avoid a reoccurrence of that kind of thing? I don't know whether it is administered by the State or the Federal Government. I know I had some people come to our office in Chicago asking for help in the investigation and we got a little bit involved. I had a staff person involved in it, checking it out. But he advised me that it seemed that the investigators really didn't want to dig and come up with the real root cause of that explosion.

Mr. WAGES. I don't fault the technical people OSHA has on staff. It has to be pretty frustrating to have spent a long——

Mr. HAYES. Well, they were under the threat of maybe losing their job if they——

Mr. WAGES. OK. You know, it is pretty tough to spend a long time developing a particular expertise to find that when you use that expertise the people who are administering the act and in charge of it aren't going to undertake responsibility to ensure that something is done. You can't blame the technical people for that.

The other fault you have is that just about any State plan that is submitted these days is going to get certified. It doesn't matter whether it is written on toilet paper.

In this day and age of the new federalism, I think it is euphemistically called, in this day and age it doesn't make a lot of difference what a State may do or may not do.

There are State plans out there right now that are basically—they are shameful, but they have received Federal certification. They are going to continue to operate.

I wouldn't say that that is the rule, but it is certainly out there.

Mr. GAYDOS. I want you to know that myself personally and members of the committee—of course, our committee changes so radically—we spent 10 years after we passed the act, the next 10 years—we have just had a respite the last 5, but for 10 years we had to fight day and night, all year long, just to keep the act intact. And you are very familiar with that.

There were always devious ways and approaches to destroy the act and to cut out large segments of it. So, maybe I get self critical of the committee and myself in that we are now so frustrated as to what we would like to see done. Maybe we should be thankful because we saved the act.

I remember we had in the House as many as 13 bills one year to destroy the act.

Mr. WAGES. I can recall that.

Mr. GAYDOS. Let me say this: Maybe our salvation lies in this little article that appeared today in USA, and it says it is a reference to Maywood, IL:

> Trial began Monday for four former corporate officials charged with murder in the cyanide poisoning death of a chemical worker who collapsed and died at a silver recovery plant here. Defendants are believed to be the first in the U.S.A. to face murder charges for a job-related workplace death.
>
> Also, Monday the deaths of three Akron, Ohio city workers in an explosion at a trash burning plant were ruled homicides by the city coroner. A grand jury there indicted a waste disposal company and five of the company officials on involuntary manslaughter charges last week.

Now, of course, we know the distinction between criminal and civil burdens of proof and the whole schmele about those distinctions, but maybe it is a possibility that there be more alert public officials and maybe this is going to help us.

I remember back when we passed the Coal Mine Safety Act, a very good friend of mine—and I think it was the Maple Creek Mine, I am not sure—but we had a river breakthrough right next to my community, western Pennsylvania. We had the river break through while they were mining. They had a dead cell and through an accident the river broke into the mine shaft and flooded the shaft and killed, oh, I think 12, around 12 or 15 miners.

And the foreman on duty was indicted. This happened in Washington County, Washington or Fayette County back in my district. He was found not guilty, but the principle has been established. And they felt that he was grossly negligent in not sealing off that spot. And it was an accident and that is how it ended up, being proven as an accident.

But there is a basis, and maybe a lot more of this is going to occur throughout the country. I don't know.

Mr. WAGES. I think the more inactivity you have on the part of the Federal agency, the more State and local community responses you are going to see.

Very candidly, the only reason I really think you had a push by this administration at all to publish a hazard communication standard was an effort to preempt the State and local ordinances and statutes that are being adopted in a number of jurisdictions.

I think that is the only reason there was a push to do it, very candidly and very honest.

Mr. GAYDOS. Let me be very candid and frank with you. I have been in this business, on this committee for 16, going on 17 years. I have got a lot of mail in those 17 years as a Congressman up in my area.

Do you know that I can count maybe on two hands the communications I have received, affirmative or negative, the personal letters from a resident involving health and safety?

I can't even remember receiving a letter anytime from a housewife or homemaker, the wife of the family, saying, Congressman, I want you to be careful and watch my husband, he is coming home sick, or make sure that he comes home to his family.

I am telling you, over all those years I have never had that happen.

And I again have to go back to my original observation. It is not a sexy subject for the American people. I don't know what the hell is wrong, if I may use that language. I don't know.

I know this, statistics indicate that they should be concerned.

Mr. WAGES. But I think there is a reason for that.

Mr. GAYDOS. What? What is the reason?

Mr. WAGES. Well, first of all, I think that you have to distinguish between safety on the job and health. This whole issue of health is in its infancy.

Now, I don't know how many letters you might get, but if you have any people exposed——

Mr. GAYDOS. I just told you how many I didn't get.

Mr. WAGES [continuing]. To asbestos, I get a bunch, and I don't represent that many workers in asbestos.

Mr. GAYDOS. You are a union official, and you are a lawyer, and that is why you got them.

Mr. WAGES. No; my point is that a lot of people aren't aware that the common cold they come home with all the time is occupationally related. They don't know that.

Part of this whole process, part of the anger that is being generated from people who have been working in this field for a long time, is that in order for people to raise the question, in order to raise the consciousness, they have got to know what the hell they are talking about. There has got to be some semblance of understanding that some of these things are, in fact, caused by their job, and they don't know that.

Mr. GAYDOS. Do you know what the foundry cheer is? Did you ever hear that expression?

Mr. WAGES. I have heard it, yes.

Mr. GAYDOS. It is something like pneumoconiosis. The "foundry cheer" is a form of pneumoconiosis and it is contracted by foundry workers, and it comes from an excessive amount of dust out on a chipping floor and what have you.

Do you know that I have never gotten a complaint from them? And I remember, you mentioned, you hit upon it, I remember back when, if you had the "foundry cheer" it was hidden rather than exposed. You would hide it from your neighbors because then possibly you wouldn't be able to do your work. And I remember we had the same experience when we passed the black lung legislation. And I was on the committee at the time. And the miners refused to take x rays, fought us bitterly, because they didn't want to take

them. They were afraid that the x ray was going to be proof positive that they were contracting pneumoconiosis and therefore they would lose their jobs.

And we fought desperately to make a job change, that if he was developing pneumoconiosis or some degree of it, some form of it, that his workplace should be changed to another workplace. We had a hell of a time with it, again, if I may use that language for emphasis.

It gets rather frustrating. Here you spend 2, 5, 8, 10 years, and when you start getting to 17, pushing 20 years on the subject matter, my good friend, you know, you start getting frustrated in this specific field as to what should have been and as to what ain't today.

Mr. WAGES. Yes.

Mr. GAYDOS. Now, I want to say this on the record. I thank people like you and the movement that you belong to, and I am not saying it because I am partial to you, I am just telling it as a fact. Hopefully, the statistics, as you say, don't lie, statisticians do. So, as a fact, the statistics indicate that the great movers, original movers, and the most effective movers, all three, rested primarily with organized labor, because they fought for it.

Now, I know it is self-serving because if they did something good they would be held in high esteem, and then, you know, their purposes for existence would be that much more solidified. I understand that.

Mr. WAGES. Sure.

Mr. GAYDOS. Everybody feels the same way about everything. Just like the frustration of this committee, we can't do anything. And we have difficulty getting people on our committee.

This should be the most sought after committee in the whole of all in Education and Labor. We should be beating them off to keep them off the committee, there would be so many requests for it.

Now, something is wrong with the American public, something is wrong, because if it was working like it should, there would be so many people wanting to get on this committee over here they would be getting letters, "Congressman, get on that committee, get down there, and save my family, make sure my daughter has a father when she gets married to give her away," and things like that, you know.

But I do want to be emphatic on record to thank you for all of the money that your organization has spent, the expertise it has developed, and the persistency, and I mean that, the persistency with which you have pursued this quest. OSHA is a real effective act, you know, with good standards, not perfect standards but good standards.

I have a request here. Mr. Chandler couldn't be here and he would like to submit some written interrogatories to you, and would you be so kind as to respond to them specifically?

Mr. WAGES. I would be happy to.

Mr. GAYDOS. As broadly as you can, because he is one of our newer members of the subcommittee, and I think he is going to be a good member. He is active.

Mr. WAGES. We would be happy to.

Mr. GAYDOS. All right.

Anything more, any statements you want to make?

Mr. WAGES. No; I think that finishes us.

Mr. GAYDOS. Counsel, do you have anything?

Mr. MORGRET. Thank you, Mr. Chairman.

I feel compelled, just because the administration has been so seriously attacked here in his written statement——

Mr. GAYDOS. That is why I recognize you.

Mr. MORGRET. I am glad that you did. You know I don't normally take you up on your offer. I just want to point out that since 1981, when this administration took office, injuries have dropped 16 percent among the American work force, fatalities have dropped by 30 percent among the American work force, and this is while a record number of Americans are employed on the job, over 105 million.

Mr. WAGES. May I respond?

Mr. GAYDOS. Sure.

Mr. WAGES. I get sick of hearing those things. First of all, when I have refinery workers who fall, break an arm, are hauled into the safety department and they sit around all day, and that is not recorded as an injury for purpose of OSHA reporting, I have a little trouble with those statistics.

There are cases like that all over this country. Now, all this balderdash about lessened incidents because of this administration's statistical summaries, I reject. I reject it categorically and I think it is a bunch of trash.

Mr. MORGRET. I assume that you know that the fatalities are an accurate count because there is no hiding that.

Mr. WAGES. Tell the 19 who died in Union Oil in Lemont, IL, that were oil workers.

Mr. MORGRET. I beg your pardon?

Mr. WAGES. We have lost more members this last year than we have in the last 10.

Mr. MORGRET. Well, I am glad that the chairman has said that Mr. Chandler can ask questions for the record, because the witness has impugned the motives of the administration and that way we can get some good responses on record.

Mr. GAYDOS. Oh, yes; I would like to have him here, and hopefully he will be here in the future when we have hearings and there is going to be this antagonistic position, just as we have the Secretary in, you know. The only requisite that I have always insisted upon in the committee is there be fairness, and that there be dignity, and that the questions be propounded, you know, in a civilized manner. There are always two different viewpoints, no question about it. Some people think we are not moving fast enough and others think they are moving too fast, you know. And I always will allow counsel to ask questions and that is how I believe we get a complete, impartial record.

And here, I would like to suggest this, not as a matter of compromise as to my feelings—my feelings are or my feeling is in this matter that one accident is too much, no matter if we have progressed or haven't. You know, there are still a heck of a lot of them out there and we need to keep working.

But I have raised that question several times, if you remember, and probably will raise it again as to these lost workday accidents. Someone smashes a finger and usually the foreman comes over and

says: "Oh, John, you go down there until that finger heals, you work down at the bin giving out tools or something." So, he is happy, you know. He gets more, you know, I guess on a per hourly wage than going home. But yet that doesn't become a statistic and it does mislead somebody. That is happening.

I worked in a mill. I know what they do, and they are still doing it, and I can understand. I would much rather them have a category, say this is an injury that is not work-loss related and that we are going to change his occupation, and put him in that category, you know. That would be the fair thing to do. But it doesn't happen because statistics then could be fuddled.

You know, there is always a question as to what is the best mode or most acceptable mode of keeping statistics and who is to check on it.

A lot of people accuse employers, corporate structures of not keeping good statistics purposely, and yet I have known a lot of them that are very accurate and are very conscientious.

I think the increasing insurance rates are going to dispel a lot of our arguments as time goes on. I think employers and employees both are going to be in unison as to cutting down work injuries, because the insurance costs are going to be fantastic. In fact, in some instances they already are costing so much money that——

Mr. HAYES. You said it.

Mr. GAYDOS. You know, Chuck, before on this committee we used to have jurisdiction over the Harbor Workers Act—do you remember—and we had some hearings on insurance costs, and I am telling you, they were frightening as to what it cost out there.

So, maybe that cost to the employer and to the employee is going to be a factor that is going to solve this problem for us in order to keep real, honest statistics. I don't know.

But I have talked too long already. Anything you want to add, gentlemen?

Mr. HAYES. Statistics don't lie. You said it.

Mr. GAYDOS. Yes; thank you very much, Mr. Wages, and everyone here for joining us. Your candor has been most welcome.

We had Robert Rowland, Assistant Secretary of Labor for OSHA, before us 2 weeks ago. I questioned whether OSHA's reliance on record checks instead of full inspections would provide ample incentives for industries to make the kinds of commitment necessary for real worker health and safety.

Your comments reaffirm my view, and I mean that. I want to emphasize that.

Thank you for expressing your concerns about the hazard communications standard.

I am sure as we continue to hear from other witnesses in this series of hearings, we will get a full understanding of what is happening now and what we can expect in the near future.

That concludes today's hearings. The next hearing in this series will be next Thursday, April 25, 9:30, this room.

If there is nothing further, the subcommittee will stand in recess until April 23.

So ordered.

[Whereupon, at 10:24 a.m., the subcommittee recessed, to reconvene at 9:30 a.m., Thursday, April 25, 1985.]

OCAW
Oil, Chemical & Atomic Workers
International Union, AFL-CIO

Joseph Misbrener, President
Michael Ricigliano, Secretary-Treasurer
L. Calvin Moore, Vice President
Robert E. Wages, Vice President

International Offices:
255 Union Blvd. Lakewood, CO 80228
303/987-2229

Mail: P.O. Box 2812, Denver, CO 80201

July 16, 1985

Honorable Rod Chandler
United States House of Representatives
216 Cannon Building
Washington, DC 20515

Dear Representative Chandler:

The attached is my response to your areas of inquiry posed in your April 30, 1985, communication in regard to my testimony before the Health and Safety Subcommittee chaired by United States Representative Joseph Gaydos. If you should have further questions, please do not hesitate to let me know.

I do apologize for the delay in responding and trust my tardiness will not unduly hamper the construction of a complete record for the Subcommittee's work.

Sincerely,

Robert E. Wages
Vice President

pmo

cc: Nolan Hancock, Legislative Director

RESPONSES TO REPRESENTATIVE CHANDLER'S QUESTIONS

PROPOUNDED TO ROBERT E. WAGES

1. **QUESTION:** On May 19, 1981, hearing records of the Subcommittee on Health and Safety show that Congressman Larry Craig asked representatives of the Oil, Chemical and Atomic Workers International Union to provide an example of what this labor union considered to be an ideal Hazard Communication label for hazardous and toxic substances. To date, the Subcommittee has not received a reply. Please provide the Subcommittee with an example of OCAW's concept of the ideal label for hazardous and toxic substances in the workplace.

RESPONSE: The ideal label for hazard identification would contain the following information:

(a) Identity (chemical or generic) of the hazardous chemical(s) contained therein;
(b) Chemical names of ingredients which are determined to be hazardous and which comprise more than 1% of the mixture, or 0.1% for chemicals which are determined to be carginogenic, mutagenic, reproductive toxins or sensitizers;
(c) The name under which the ingredients are regulated by OSHA, if there is a regulation; and
(d) A warning of all hazards associated with use or contact with the substance. This would include chronic and acute health effects information.

2. **QUESTION:** In your testimony before the Subcommittee on April 16, 1985, in reply to a reading into the record of the following of rates of occupational injury and fatalities during the tenure of the Reagan Administration, stated that he was, "sick and tired of hearing these statistics. . ." and further stated that he knew of an example of a worker with a broken limb being reassigned to light duties to avoid the notation of a recordable occupational injury. It is important for the Subcommittee to know if occupational injuries are being truly recorded. The possibility that occupational injuries requiring medical attention are not being recorded merits investigation. Therefore, Mr. Wages, please share specific names of employees and employers, dates and descriptions of any and all medically treated occupational injuries you know of which were not recorded as occupational injuries.

RESPONSE: I do not believe it is appropriate to provide a list of specific examples of employers engaged in the practice of assigning light duty jobs to employees injured on the job for the purpose of avoiding the consequences of recording an industrial injury. I would provide one example -- myself -- who, while employed in the oil industry suffered two injuries requiring medical treatment and never "lost" any time and consequently the injuries were not recorded. This happens to be a prevalent practice in the manufacturing segment.

The most pervasive practice with regard to statistical analysis is the failure to gather statistical information on injury resulting from chemical exposure. Since we do not get totally accurate information on industrial accidents in light of the practice of avoiding, where possible, recording those accidents, it is not difficult to imagine the difficulties which would be associated with statistical compilation of health effects of chemical exposure.

3. **QUESTION:** In your written testimony before the Subcommittee you stated that the Hazard Communication standard should be broadened to cover the 80% of the workforce now excluded from coverage. Please inform the Subcommittee if all Standard Industrial Classification work should be covered by the Hazard Communication Standard, or, if only some SIC codes should be covered, which ones should be included. Please explain your reasoning on the practical impact of your extensions to other SIC codes.

RESPONSE: The scope of the Standard should be broadened to include all employees covered by the Occupational Safety and Health Act. The practical impact of this is simple: Every employee has the right to know, "in order to take steps to protect his or her health," according to the Standard's preamble. To set up categories of workers excluded from this Standard's coverage is a violation of OSHA's mandate in the Act. Thus, all industrial classifications should be covered without exception.

To exclude some groups of workers normally covered by OSHA from the coverage of such a comprehensive regulation is to relegate these workers to the status of second-class citizens.

4. **QUESTION:** In testimony, disappointment was expressed in federal preemption of state and local "Right to Know" laws. States with Occupational Safety and Health Plans may develop such standards and may not be preempted by federal standards. Do you favor the adoption of state plans for worker health and safety and for promulgation of "right to know" regulations? If not, please specify why not? If State Occupational Safety and Health Plans are deemed inadequate by OCAW, should Congress amend the Occupational Safety and Health Act of 1970 to abolish this Congressional provision for state plans?

RESPONSE: As stated in our testimony on April 16, we would prefer the adoption of one strong, uniform federal regulation on Right to Know. In this context, we supported the Hazard Identification proposal the Carter Administration issued, which was immediately withdrawn when President Reagan took office. We have been forced to promote State Right to Know laws in the absence of strong federal legislation in this area. We believe, however, that state laws can be complementary to federal legislation in some cases. For instance, in the area of community Right to Know, we feel a state statute is the most efficient mechanism for informing the community.

OCAW is definitely against state occupational safety and health plans and would support a congressional amendment to abolish them. This would, however, only be if we saw at the same time a congressional commitment to insure that federal OSHA returned to its role as protector of workers rather than a partner with industry.

You should remember that it was because the states were not doing an adequate job in worker health and safety that brought about the passage of the Federal OSHA legislation in the first place.

OSHA OVERSIGHT--WORKER HEALTH AND SAFETY IN THE MANUFACTURE AND USE OF TOXIC AND HAZARDOUS SUBSTANCES

THURSDAY, APRIL 25, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND SAFETY,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2261, Rayburn House Office Building, Hon. Joseph M. Gaydos (chairman of the subcommittee) presiding.

Members present: Representatives Gaydos, Murphy, and Hayes.

Staff present: Sy Holzman, deputy staff director; Lee Bassford, staff assistant of the Subcommittee on Health and Safety; Dottie Strunk, minority senior legislative associate; and Peter Morgret, minority legislative associate of the Committee on Education and Labor.

Mr. GAYDOS. The subcommittee will be in order.

Today's hearing continues this subcommittee's interest and concern about OSHA's hazard communication standard and the prospects for its effectiveness in preventing death, illness, and injury among workers who are exposed to toxic and hazardous substances during the course of their manufacture, storage, distribution, and use.

There is considerable concern about the standard. Questions were raised in testimony at past hearings of this and other subcommittees of the House and the Senate as to whether the scope of industries covered by the standard is too narrow, whether the trade secrets portion of the standard offers manufacturers too easy a way to refrain from providing adequate safety and health information, and whether the Occupational Safety and Health Administration itself is going to be able to enforce the standard.

I am hopeful that with our new Secretary being confirmed, that we will have some answers and that Mr. Brock can provide the kind of leadership the Department of Labor, in general, and OSHA, in particular, need. Unless that Department and the agencies within it function properly, American workers have no other place to go.

Our witness today is Dr. Frank Mirer, director of health and safety for the United Auto Workers. The International Brotherhood of Teamsters were invited to appear here today, but its representative was unable to attend. Instead, the Teamsters have sub-

mitted a prepared statement which, without objection, will become part of the official record of this hearing.

[The information follows:]

INTERNATIONAL BROTHERHOOD OF TEAMSTERS
CHAUFFEURS • WAREHOUSEMEN & HELPERS
OF AMERICA
25 LOUISIANA AVENUE, N.W. • WASHINGTON, D.C. 20001

OFFICE OF
JACKIE PRESSER
GENERAL PRESIDENT

April 22, 1985

The Honorable Joseph M. Gaydos, Chairman
Subcommittee on Health and Safety
Committee on Education and Labor
U. S. House of Representatives
Rayburn House Office Building, B-345A
Washington, D. C. 20515

Dear Congressman Gaydos:

Thank you for your letter of March 26, 1985, inviting us to appear before your Subcommittee on the issue of Worker "Right to Know." Herewith we are respectfully submitting our statement regarding our experience with the issue. We would appreciate having our statement read into the record of the Subcommittee's proceedings on April 23, 1985.

Sincerely,

Suzanne J. Kossan
Industrial Hygienist
Safety and Health Department

SJK:m/b
Enclosure
CM#248528
cc: Mr. R. V. Durham, Director, Safety & Health Department
Mr. Paul R. Locigno, Director, Governmental Affairs
Mr. David A. Sweeney, Director, Legislative Department

Prepared Statement of the International Brotherhood of Teamsters on Worker "Right To Know"

The International Brotherhood of Teamsters appreciates the opportunity to submit our views for the record regarding worker "Right to Know" about hazardous substances.

We appreciate the Subcommittee's ongoing interest in the effectiveness of OSHA's Hazard Communication Standard. As you know, the IBT has previously testified before this Subcommittee on May 9, 1984, and March 27, 1985, to discuss this issue. On both occasions, we urged the Subcommittee to seek a legislative solution to the problem that we see with the scope of OSHA's Hazard Communication Standard. We are again looking to the Subcommittee for assistance.

The IBT represents 1.9 million members, many of whom are employed in non-manufacturing industries, but who nonetheless face many serious hazards to their health because of their exposure to toxic substances - substances about which they know much too little.

Among those facing hazardous chemicals are the Teamster drivers and warehouse workers. The OSHA standard covers workers in manufacturing industries who use hazardous chemicals. But what about the workers who transport, off-load, store, re-load, and sometimes re-package these chemicals in the course of distributing them? Under the current OSHA standard, these workers have no right to information fully describing all the hazards of the materials nor appropriate information

and training on special precautions in handling and in cleaning up spills. The Department of Transportation regulations on hazardous materials are oriented toward protection of the general public and are totally inadequate to provide safety and health protection for workers occupationally or accidentally exposed to these materials.

Why should a driver transporting 5,000 gallons of isocyanates (a group of toxic chemicals which includes the chemical MIC from the Bhopal, India tragedy), for example, not have the right to complete information on the hazards of the materials they are hauling while a worker in a manufacturing plant handling 55 gallons of the same material be given this right?

Why should a dockworker for a trucking company who must clean up spills of toxic solvents, such as xylene, naptha, and phenol not have the right to complete information and training on the hazards of the material they handle while dockworkers handling the same chemicals at a manufacturing company's shipping and receiving dock have this right?

Why should a truck mechanic required to replace asbestos brakes in heavy duty trucks at a trucking terminal maintenance shop be any less protected than a mechanic working on a pick-up truck at a manufacturing company?

This discrepancy in the OSHA standard between manufacturing and non-manufacturing employee protections just does not make sense. We feel it arbitrary and unnecessary that non-manufacturing

employees are exempt from OSHA's Hazard Communication Standard.

The Teamsters have had numerous reports of dockworkers being hospitalized due to chemical exposures resulting from a spill. (See attached.) An informal IBT survey of our members involved in tank haul operations showed that many members are potentially exposed to hazardous chemicals when they load and unload tank trucks, stand over manholes to check tank levels, etc. We have had transportation employers under contract cited by OSHA for violations of OSHA's Asbestos Standard during truck brake repair operations, but OSHA does not require these employers to give our members information on what asbestos can do to their health. It is clear from these examples that our members in transportation are at risk of chemical injury and illness. This is why we have difficulty accepting the fact our members in this industry are not protected under OSHA's standard.

Like our members in the transportation industry, our construction and service industry members are at risk of chemical injury and illness as well. Yet they also have been exempted from the OSHA Hazard Communication Standard.

In our view, providing the "Right to Know" to transportation, construction, and service industry workers is not unduly burdensome. Some 19 states who have "Right to Know" laws are already providing these protections to those workers exempted under the Federal OSHA Hazard Communication Standard. If 19 states have

been able to provide protections for workers in all industries, we feel it is feasible for Federal OSHA to provide "Right to Know" protection for all workers as well.

To remedy this problem of special importance to the Teamsters, we are seeking legislative language which would bring workers in all industries under the "Right to Know." We stand ready to assist you in drafting such language if you would find our help useful.

Thank you again for your commitment to workplace safety and health and your special interest in the "Right to Know" issue.

McLean Trucking cited for safety violations

ROBERT RIEMANN
Business Editor

MAYBROOK — The U.S. Occupational Safety and Health Administration (OSHA) has fined the McLean Trucking Co. $720 for safety violations in connection with a chemical spill in March at the company's terminal on Neelytown Road in the town of Montgomery.

The penalty results from improper safety procedures during a corrosive chemical spill at the terminal on March 24, according to David Boyce, an industrial hygiene supervisor with OSHA's Albany office.

McLean operates a break-bulk terminal near Maybrook where truckloads of various goods are unloaded, sorted and repacked for shipment to other terminals. The local terminal employs about 250.

Edwin R. Brenegar, vice president of personnel for the McLean Trucking Co., declined to comment on the OSHA citation, the chemical spills or the company's safety procedures.

The citation was issued May 31. McLean, based in Winston-Salem, N.C., has until June 20 to file legal objections to the citation, Boyce said. If no legal action is taken by then, the citation becomes a final order.

The OSHA investigation was initiated by Donald W. Karl, 29, who was an assistant shop steward for Local 445 of the International Brotherhood of Teamsters at the time of the spill.

Karl said that at about 11:15 a.m. on March 24, a forklift truck punctured a 55-gallon drum containing phenol, naphtha and xylene. Phenol is a varnish and naptha and xylene are solvents, according to the Environmental Protection Agency (EPA). Karl said the liquid saturated the ground under the truck. Workers downwind of the spill complained of headaches and nausea.

By 1 p.m. the truck was pulled out and sand was dumped on the spill to absorb the liquid. Karl said he called union officials and asked them to come down to check the terminal.

Five employees were later treated at the St. Luke's Hospital emergency room in Newburgh. A sixth employee was treated at Arden Hill Hospital in Goshen.

Karl also said another spill occurred at the dock on April 6, which involved drums of 2-5 Xylenol, a white powder, which had broken open during shipment. Karl said he was working on the dock when both spills occurred.

Ray Ebert, secretary treasurer of Local 445, confirmed that Anthony Gazzara, a dock worker, was fired when he objected to working next to the 2-5 Xylenol spill. He was reinstated after intervention by the union.

The serious violation cited by OSHA is in two parts. The first, which relates to the March 24 spill, alleges that boots, gloves, protective eye equipment and impervious coveralls where not used. The company was also cited for not having quick drenching showers and eye wash equipment within the work area for immediate use, Boyce said. These violations carry a fine of $320.

The second part of the citation relates to the company's alleged inadequate respirator program. The citation states that there is no written procedure for the safe use of the respirator, the respirator was not inspected after each use, or at least once a month, there were no records of inspections and the respirator was not stored properly to protect it against dust, sunlight, heat, extreme cold, excessive moisture or dangerous chemicals, Boyce said. These four violations carry a proposed penalty of $400.

Boyce said the OSHA investigation started April 20 and ended May 23. On the first day of the inspection, the respirator cylinder was empty, he said.

Another less serious citation alleged that the company failed to report to OSHA within 48 hours after the employees were sent to the hospital.

McLean also is under investigation by the Attorney General's Office for possible violation of the state's Right to Know law, according to Nathan Riley, information officer. The state Right-to-Know law requires, among other things, that employees be trained on how to handle toxic spills.

James Hardy, an engineer with the state Department of Environmental Conservation, said he investigated the terminal after both the March 24 and April 6 spills and found that the company had properly disposed of the waste.

Herman Phillips, a spokesman for the EPA in New York City, confirmed that his agency was notified by the National Response Center about the March 24 spill of a 55-gallon drum of varnish with phenol in it. Karl said he was told by company officials they had contacted the EPA and other agencies.

Ebert said that following the March 24 spill he came down to the dock, and talked to Karl and McLean officials. After the incident, Ebert said he wrote to McLean, urging the company to set up training procedures to handle spills and to provide information on all chemicals the dock workers handle.

Michael J. McCann, executive director for the Center for Occupational Hazards in New York City, said the naphtha and xylene solvents are flammable. He also said the phenol was hazardous because it could be absorbed through the skin.

MIDDLETOWN, N.Y.
TIMES-HERALD-RECORD
MORNING - 66,186
SUNDAY RECORD
SUNDAY - 69,997

JUN 9 1984

LEO J. O'BRIEN FEDERAL BUILDING, ROOM 132
ALBANY AREA OFFICE
CLINTON AVENUE AND NORTH PEARL STREET
ALBANY, NEW YORK 12207

5/31/84 | 1712421

5. Reporting ID	6. CSHO ID
213100	A1505
7. Optional Report No.	8. Page No.
211	1 of 2

12. Type of Violation(s)	13. Citation Number(s)
SERIOUS	1

The violation(s) described in this Citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.

10. Inspection Date(s): 4/20/84 - 5/23/84

11. Inspection Site:

9. To: McLean Trucking Company
and its successors
Neely Town Road
Montgomery, New York 12549

Penalties Are Due Within 15 Days of Receipt of This Notification Unless Contested (See enclosed Booklet)

This Section May Be Detached Before Posting

THE LAW REQUIRES that a copy of this Citation be posted immediately in a prominent place at or near the location of the violation(s) cited below. This Citation must remain posted until the violations cited below have been abated, or for 3 working days (excluding weekends and Federal holidays), whichever is longer.

This Citation describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed below are based on these violations. You must abate the violations referred to in this Citation by the dates listed below and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this Citation and penalty you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. (See the enclosed booklet which outlines your rights and responsibilities and should be read in conjunction with this form.) You are further advised that unless you inform the Area Director in writing that you intend to contest this Citation or proposed penalties within 15 working days after receipt, this Citation and the proposed penalties will become a final order of the Occupational Safety and Health Review Commission and may not be reviewed by any court or agency. Issuance of this Citation does not constitute a finding that a violation of the Act has occurred unless there is a failure to contest as provided for in the Act or, if contested, unless this Citation is affirmed by the Review Commission.

2. Item Number / 3. Standard, Regulation or Section of the Act Violated / 14. Description	15. Date by Which Violation Must Be Abated	16. Penalty
1a 29 CFR 1910.132(a): Protective equipment was not used when necessary whenever hazards capable of causing injury and impairment were encountered: (a) Corrosive liquid spill clean up operations, on pavement area near the West side of the loading dock. No protective equipment for the body and extremities was required to be used during chemical spill control operations on 3/24/84., i.e., boots, gloves & impervious coveralls.	6/5/84	$320
1b 29 CFR 1910.133(a)(1): Protective eye equipment was not required where there was a reasonable probability of injury that could be prevented by such equipment: (a) Corrosive liquid spill clean up operations, on pavement area near the West side of the loading dock. No protective equipment for the eyes was required to be worn during chemical spill control operations on 3/24/84.	6/5/84	
1c 29 CFR 1910.151(c): Where employees were exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body were not provided within the work area for immediate emergency use: (a) Corrosive spill clean up operations and/or for incidents where corrosive material containers fail expose employees to the hazards of the corrosives on the dock area.	7/2/84	

Area Director: John M. Tomich

16. On Last Page

NOTICE TO EMPLOYEES — The law gives an employee or representative the opportunity to object to any abatement date set for a violation if he believes the date to be unreasonable. The contest must be mailed to the U.S. Department of Labor Area Office at the address shown above within 15 working days (excluding weekends and Federal holidays) of the receipt by the employer of this Citation and penalty.

EMPLOYER DISCRIMINATION UNLAWFUL — The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he has been discriminated against may file a complaint no later than 30 days after the discrimination with the U.S. Department of Labor Area Office at the address shown above.

EMPLOYER RIGHTS AND RESPONSIBILITIES — The enclosed booklet outlines employer rights and responsibilities and should be read in conjunction with this notification.

Total Penalty for This Citation

Make Check or Money Order Payable to: "DOL-OSHA"

Inspection Number and Suffix

CITATION AND NOTIFICATION OF PENALTY

ORIGINAL

OSHA-2 (Rev. 1/84)

Citation and Notification of Penalty

LEO W. O'BRIEN FEDERAL BUILDING, ROOM 132
ALBANY AREA OFFICE
CLINTON AVENUE AND NORTH PEARL STREET
ALBANY, NEW YORK 12207

3. Issuance Date	4. Inspection Number
5/31/84	1712421
5. Reporting ID: 213100	6. CSHO ID: A1509
7. Optional Report No.: 211	8. Page No.: 2 of 2

1. Type of Violation(s)	2. Citation Number(s)
SERIOUS	1

The violation(s) described in this Citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.

10. Inspection Date(s): 4/20/84 - 5/23/84

11. Inspection Site:

9. To: McLean Trucking Company
and its successors
Healy Town Road
Montgomery, New York 12549

Penalties Are Due Within 15 Days of Receipt of This Notification Unless Contested

See enclosed Booklet

This Section Must Be Displayed Before Posting

THE LAW REQUIRES that a copy of this Citation be posted immediately in a prominent place at or near the location of the violation(s) cited below. The Citation must remain posted until the violations cited below have been abated, or for 3 working days (excluding weekends and Federal holidays), whichever is longer.

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12. Item Number / 13. Standard, Regulation or Section of the Act Violated / 14. Description	15. Date by Which Violation Must Be Abated	16. Penalty
2a 29 CFR 1910.134(e)(3): Written procedures were not prepared covering safe use of respirators in dangerous atmospheres that might have been encountered in normal operations or in emergencies: (a) For the use of the Survivair SCBA located in the dock office and available for use in chemical spill control.	Immediately	$400
2b 29 CFR 1910.134(f)(2)(i): A respirator that was not routinely used but was kept ready for emergency use was not inspected after each use and at least monthly to assure that it was in satisfactory working condition: (a) For the Survivair self contained breathing apparatus located in the dock office and available for use in chemical spill control. 1) Air cylinders were empty and the respirator was available for use.	Immediately	
2c 29 CFR 1910.134(f)(2)(iv): Records were not kept of inspection dates and findings for respirators maintained for emergency use: (a) For the Survivair SCBA located in the dock office and available for use in chemical spill control.	Immediately	
2d 29 CFR 1910.134(f)(5)(i): After inspection, cleaning and necessary repair, respirators were not stored to protect against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals: (a) Survivair SCBA located in the dock office and available for use in chemical spill control.	Immediately	
The above alleged violations (1a - 2d) have been grouped because they involve similar or related hazards that may increase the potential for illness.		

. Area Director

David C. Boyce

John M. Tomich

18. $720

Total Penalty for This Citation

Make Check or Money Order Payable to: "DOL-OSHA"

Indicate Inspection Number on Remittance

NOTICE TO EMPLOYEES — The law gives an employee or a representative the opportunity to object to any abatement date set for a violation if he believes the date to be unreasonable. The contest must be mailed to the U.S. Department of Labor Area Office at the address shown above within 15 working days (excluding weekends and Federal holidays) of the receipt by the employer of this Citation and penalty.

EMPLOYER DISCRIMINATION UNLAWFUL — The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he has been discriminated against may file a complaint no later than 30 days after the discrimination with the U.S. Department of Labor Area Office at the address shown above.

EMPLOYER RIGHTS AND RESPONSIBILITIES — The enclosed booklet outlines employer rights and responsibilities and should be read in conjunction with this notification.

CITATION AND NOTIFICATION OF PENALTY

ORIGINAL

OSHA-2 (Rev. 1/84)

U.S. Department of Labor
Occupational Safety and Health Administration

Citation and Notification of Penalty

LEO W. O'BRIEN FEDERAL BUILDING, ROOM 132
ALBANY AREA OFFICE
CLINTON AVENUE AND NORTH PEARL STREET
ALBANY, NEW YORK 12207

Inspection Number	Citation Number
OTHER	2

The violation(s) described in this Citation are alleged to have occurred on or about the day the inspection was made unless otherwise indicated within the description given below.

3. Issuance Date	4. Inspection Number
5/31/84	1712421
5. Reporting ID	6. CSHO ID
213100	A1505
7. Optional Report No.	8. Page No.
211	1 of 1

10. Inspection Date(s): 4/20/84 - 5/23/84

11. Inspection Site:

9. To: McLean Trucking Company
and its successors
Neely Town Road
Montgomery, New York 12549

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This Section May Be Detached Before Posting

THE LAW REQUIRES that a copy of this Citation be posted immediately in a prominent place at or near the location of the violation(s) cited below. The Citation must remain posted until the violations cited below have been abated, or for 3 working days (excluding weekends and Federal holidays), whichever is longer.

This Citation describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed below are based on these violations. You must abate the violations referred to in this Citation by the dates listed below and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this Citation and penalty you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. (See the enclosed booklet which outlines your rights and responsibilities and should be read in conjunction with this form.) You are further advised that unless you inform the Area Director in writing that you intend to contest the Citation or proposed penalties within 15 working days after receipt, this Citation and the proposed penalties will become a final order of the Occupational Safety and Health Review Commission and may not be reviewed by any court or agency. Issuance of this Citation does not constitute a finding that a violation of the Act has occurred unless there is a failure to contest as provided for in the Act or, if contested, unless the Citation is affirmed by the Review Commission.

2. Item Number / 3. Standard, Regulation or Section of the Act Violated / 14. Description	15. Date by Which Violation Must Be Abated	16. Penalty
1 29 CFR 1904.8: An oral or written report of an employment accident resulting in hospitalization of five or more employees was not made within 48 hours after the occurrence to the nearest area office of the Occupational Safety and Health Administration: (a) For employees who went to St. Lukes hospital as a result of a chemical spill on 3/24/84.	Immediately	0

Mr. GAYDOS. In the event that any member of the subcommittee would like to pose written questions based on the Teamsters remarks, please submit them to the majority staff counsel. So if you have any questions, make sure that we go through the staff over here because we want to coordinate. There will be no limitation on what you can ask, but just so we are apprised of what you are doing.

Without objection, my written statement will be made part of the record. So ordered.

[The opening statement of Hon. Joseph M. Gaydos follows:]

OPENING STATEMENT OF HON. JOSEPH M. GAYDOS, CHAIRMAN, SUBCOMMITTEE ON HEALTH AND SAFETY, APRIL 25, 1985

TODAY'S HEARING CONTINUES THIS SUBCOMMITTEE'S INTEREST AND CONCERN ABOUT OSHA'S HAZARD COMMUNICATION STANDARD AND THE PROSPECTS FOR ITS EFFECTIVENESS IN PREVENTING DEATH, ILLNESS AND INJURY AMONG WORKERS WHO ARE EXPOSED TO TOXIC AND HAZARDOUS SUBSTANCES DURING THE COURSE OF THEIR MANUFACTURE, STORAGE, DISTRIBUTION AND USE.

THERE IS CONSIDERABLE CONCERN ABOUT THE STANDARD. QUESTIONS WERE RAISED IN TESTIMONY AT PAST HEARINGS OF THIS AND OTHER SUBCOMMITTEES OF THE HOUSE AND SENATE AS TO WHETHER

THE SCOPE OF INDUSTRIES COVERED BY THE STANDARD IS TOO NARROW, WHETHER THE TRADE SECRETS PORTION OF THE STANDARD OFFERS MANUFACTURERS TOO EASY A WAY TO REFRAIN FROM PROVIDING ADEQUATE SAFETY AND HEALTH INFORMATION, AND WHETHER THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION ITSELF IS GOING TO BE ABLE TO ENFORCE THE STANDARD.

THE LAST IS OF PARTICULAR CONCERN. LAST WEEK, THE OFFICE OF TECHNOLOGY ASSESSMENT RELEASED ITS COMPREHENSIVE STUDY OF OSHA, ENTITLED "PREVENTING ILLNESS AND INJURY IN THE WORK-PLACE." I COMMEND THE STUDY TO ALL OF YOU WHO HAVE A LONG-STANDING INTEREST IN WORKER SAFETY AND HEALTH.

AMONG ITS BASIC CONCLUSIONS WITH RESPECT TO OSHA, THE OTA STUDY DISPUTED OSHA'S CONTENTION THAT THE DECREASE IN

WORKER DEATHS AND INJURIES DURING THE PAST FEW YEARS WERE DUE TO THE AGENCY'S ENFORCEMENT OF ITS STANDARDS.

OTA, IN FACT, SAID THAT THE DECREASE IN WORKER DEATHS AND INJURIES WAS DUE MORE TO THE ECONOMIC DOWNTURN OF THE LATE 1970'S AND EARLY 1980'S, THAN TO OSHA'S ACTIVITIES IN ENFORCING STANDARDS AND INSPECTING WORKPLACES.

THE WITNESS AT LAST WEEK'S HEARING, BOB WAGES, VICE PRESIDENT OF THE OIL, CHEMICAL AND ATOMIC WORKERS INTERNATIONAL UNION, SAID MUCH THE SAME THING. HE CONTENDED THAT WHILE THE HAZARD COMMUNICATION STANDARD NEEDED CONSIDERABLE REVISION, ESPECIALLY WITH RESPECT TO THE INDUSTRIES COVERED, THE TRADE SECRETS PROVISION AND THE MATERIAL SAFETY DATA SHEETS, IT WAS THE LAXITY OF THE PRESENT ADMINISTRATION OF OSHA THAT WOULD MAKE THE STANDARD LESS THAN EFFECTIVE.

I, FRANKLY, MUST CONCUR. I HAVE FELT FOR SOME TIME THAT OSHA HAS NOT BEEN VIGOROUSLY PURSUING ITS GOALS. I HAVE FELT THAT IT HAS BEEN LESS THAN AGGRESSIVE IN EFFECTING MEANS TO DEVELOP AND ENFORCE STANDARDS DESIGNED TO PROTECT WORKERS.

I AM CONCERNED ABOUT REPORTS OF POOR MORALE WITHIN THE AGENCY ITSELF AND I WAS PLEASED TO NOTE THAT BILL BROCK, THE SECRETARY OF LABOR DESIGNATE, SAID AT HIS CONFIRMATION HEARING BEFORE THE SENATE LABOR AND HUMAN RESOURCES COMMITTEE THAT THE IMPROVEMENT OF MORALE IN OSHA AND A REVIEW OF PENDING STANDARDS AND OTHER DECISIONS WOULD BE AMONG HIS FIRST PRIORITIES AS SOON AS HE WAS CONFIRMED.

I HOPE MR. BROCK CAN PROVIDE THE KIND OF LEADERSHIP THE DEPARTMENT OF LABOR, IN GENERAL, AND OSHA, IN PARTICULAR, NEED BECAUSE UNLESS THAT DEPARTMENT AND THE AGENCIES WITHIN IT FUNCTION PROPERLY, AMERICAN WORKERS HAVE NO PLACE TO GO.

OUR WITNESS TODAY IS DR. FRANK MIRER, DIRECTOR OF HEALTH AND SAFETY FOR THE UNITED AUTO WORKERS. THE INTERNATIONAL BROTHERHOOD OF TEAMSTERS WAS INVITED TO APPEAR, BUT ITS REPRESENTATIVE WAS UNABLE TO ATTEND. INSTEAD, THE TEAMSTERS HAVE SUBMITTED A PREPARED STATEMENT WHICH, WITHOUT OBJECTION, WILL BECOME PART OF THE OFFICIAL RECORD OF THIS HEARING.

IN THE EVENT ANY MEMBER OF THE SUBCOMMITTEE WOULD LIKE TO POSE WRITTEN QUESTIONS BASED ON THE TEAMSTERS' REMARKS, PLEASE SUBMIT THEM THROUGH THE MAJORITY STAFF OF THE SUBCOMMITTEE. THE RESPONSES TO ANY SUCH QUESTIONS ALSO WILL BE INCLUDED IN THE HEARING RECORD.

Mr. GAYDOS. Are there any statements we would like to enter at this time from the minority?

There being none, then on behalf of the committee I am, Doctor, very happy to welcome you. If you would identify for the record who is accompanying you, then proceed in a manner that would best suit your purposes and fulfill your needs. The floor is yours.

STATEMENT OF FRANKLIN E. MIRER, DIRECTOR, HEALTH AND SAFETY DEPARTMENT, INTERNATIONAL UNION, UAW, ACCOMPANIED BY BETTY ROBINSON

Mr. MIRER. Thank you very much, Mr. Chairman.

I am Dr. Franklin E. Mirer. I am an industrial hygienist and toxicologist and director of the health and safety department of the UAW International Union. I am accompanied today by Betty Robinson of our Washington legislative office.

I welcome the opportunity to bring you information about health problems caused by chemical exposures on the job and the present impact of OSHA's hazard communication standard on efforts to bring those hazards under control.

I would like to summarize my testimony, but I would like the full statement entered in the record.

Mr. GAYDOS. Without objection, your full statement will be part of the formal proceedings. So ordered.

[The prepared statement of Franklin E. Mirer follows:]

PREPARED STATEMENT OF FRANKLIN E. MIRER, PH.D., DIRECTOR, HEALTH AND SAFETY DEPARTMENT, INTERNATIONAL UNION, UAW

I am Dr. Franklin E. Mirer. I am an industrial hygienist and toxicologist, and Director of the Health and Safety Department, UAW.

I welcome the opportunity to bring you information about the health problems caused by chemical exposures on the job, and the present impact of OSHA's Hazard Communication Standard on efforts to bring those hazards under control.

The starting point for these comments is to bring to attention the severe problems of occupational disease caused by chemical and physical exposures on the job. The relationship between exposure and disease has emerged with great impact in recent years. In one sense it is good news: the toll of cancer, lung disease, nerve, kidney, liver and other disorders, and even much of the bone and joint disease thought to be natural wear and tear, are not inevitable. These diseases are the predictable and preventable results of chemical exposures and physical stresses on the job. This emerging knowledge, if combined with the intense efforts to abate hazards by workers, unions, employers, chemical and equipment suppliers, and government, can lead to better workplaces and radical reduction of future risks.

Health and safety conditions have improved markedly for UAW members since the passage of the OSHA law in 1970 and the negotiation of pattern setting national health and safety contract provisions in 1973. The injury rates in major UAW-represented companies dropped by 80% over this period. Exposures to some known hazardous chemicals governed by standards, such as asbestos, lead, and silica were reduced. Many unsafe and unhealthy conditions were abated. These improvements came from the combination of collective bargaining and the grievance procedure,

government standards and enforcement, cooperative programs with management, and upgraded company activities.

Despite these successes, many serious problems remain. In the past two years, injury rates in the auto industry began to creep upward again. The problem of fatal accidents among skilled trades and others in maintenance operations persist. Most important, as the dangers of chemical exposures at work become better known as the result of new research, the gap between the preventive measures in place and the size of task appears wider than ever. This perception deeply affects our members, and gives additional urgency to our response.

The Union's role is made more difficult, because the federal government under Reagan has refused to assert its central role in reducing on-the-job hazards through OSHA, EPA, and research programs, and has actively dismantled some of the hard won protections developed in recent years. Over the past four years, we have prevented the most serious erosion of protections, and made progress in some areas. Now, despite the obstacle in Washington, the chances for improvement are good because of the increased understanding among workers and the public of dangers and the means of abating them, and because of the greatly increased public support and recognition of workers' rights to a safe workplace. In this atmosphere at least some employers will work together with the Union to put in place organized programs to control chemical hazards. We are confident these programs will be beneficial in the future.

The key points of my testimony are as follows:

1. Chemical exposures are a more serious public health problem in the chemical using industries than in the chemical manufacturing industry itself.

2. Recent activity is a cause for optimism, but concrete results have not been seen and could slow down or collapse.

3. The OSHA Hazard Communication Standard is inadequate to meet the needs of workers and employers in chemical using industry.

4. OSHA's activity since the standard was promulgated gives little evidence that the standard will be enforced effectively, and gives little guidance in how to go about compliance.

5. The central problem with implementation of the standard and program remains the behavior of the chemical industry.

6. Currently developing negotiated programs with employers show a great deal of promise in improving conditions, especially if they set a pattern for other companies and industries.

1. **Chemical exposures are a more serious public health problem in the chemical using industries than in the chemical industry itself.** The number of workers exposed is greater, the levels of exposure may be greater, and the control measures are often more difficult to achieve.

Chemical exposures here are to chemical formulations or mixtures, marketed under trade names. For years, the identity of many ingredients was withheld as a trade secret, or inadequately described with health hazards either concealed or minimized. Even employers with expertise -- such as the auto companies -- have difficulty in evaluating the hazards or developing independent knowledge of the dangers of the tens of thousands of chemical products they buy and use to make cars. The situation for smaller user employers is worse -- they have virtually no resources and rely on the chemical industry for direction.

These problems are probably magnified as we move from manufacturing to the construction industry and the service sector.

Occupational cancer has been a special focus of concern. There is some scientific debate about the percentage of cancers due to occupation. If 5% of American cancer victims got their disease on the job -- and this is a mid-range estimate -- that is equivalent to nine Bhopals per year in the United States. However, we aren't aware of them because victims are individual cases, not mass tragedies. The recent experience in the transportation equipment industry, where UAW members work has shown that usual estimates of occupational cancer prevalence may understate these risks.

Recently completed studies, some in UAW-represented plants, some performed by the Union itself, have uncovered excesses of cancer among:

- Foundry workers (lung);
- Die cast and plating workers making automotive hardware and trim (lung);
- Workers in machining operations (stomach, other digestive);

-- In car assembly plants (lung, lymphopoietic);

-- Electronics operations (brain);

-- Welders (lung); and

-- Model and patternmakers on the design staffs of the auto companies (colo-rectal).

These victims are not counted among the groups suffering from occupational cancer, because the information is new and specific agents are not identified.

There are chemically induced diseases other than cancer. Our investigations of silica overexposure in the foundry industry, and lead exposures in battery making and other operations, have documented widespread exposures at levels which exceeded standards and which are now understood to reliably produce serious occupational disease. For example, most workers in battery plants before 1975 can document a lead-in-blood result at levels which would be expected to contribute to kidney disease.

Laboratory and clinical studies now provide strong confirmation of previous reports that other agents can be expected to produce disease at levels of exposure which frequently exist in today's workplaces.

These include:

Isocyanates, which are used in foamed plastics, insulation and paints, and which cause a progressive lung disease (high levels, which cause immediate death, such as those achieved by methyl isocyanate in Bhopal, India, are less of a problem in the United States than lower chronic exposure);

Glycol Ethers, which are solvents found in many paints, inks, and cleaners, cause reproductive disorders in laboratory animals and nerve, bone marrow and kidney damage;

Formaldehyde, which is generated from many plastics, permanent press fabrics and used as a sterilizer causes irritation and cancer;

Fluorocarbon Solvents, which cause irregular heartbeat which can lead to sudden death.

Other commonly used chemicals for which there is evidence of health risks presently prevailing levels of exposure are: wood dust, aliphatic amines, trichloroethylene, methyl chloroform, cadmium, chromates, methylene chloride, glycidyl ethers and curing agents in epoxy resins, cutting fluids, flame retardants.

This is a substantial list for our one industry. And you must remember the construction industry and the service sector employ a large and growing number of workers who are exposed to many of the same chemicals under substantially less controlled conditions than in manufacturing.

This problem is emerging now because of the grossly inadequate testing for the toxicity of the basic materials of industry, materials manufactured in up to billion pound amounts and distributed throughout our society. These are present in largest concentrations in our workplaces.

Widespread exposures have been known for years. Indications of the potential dangers of these materials have been in the scientific literature for decades. The methods and standards for laboratory testing of toxicity have also been widely accepted a long time as well. Despite this, the results of careful and sensitive studies of the affects such materials have only emerged recently, primarily from government-sponsored studies, often from government laboratories. The federal government's National Toxicolcgy Program, though limited in scope, has taken the lead, not the chemical industry which makes these materials and profits from them.

Similarly, health studies in people exposed to these chemicals on the job were minimal for decades. These studies would provide warnings for the much wider group of consumers or community populations exposed to these chemicals. Again, efforts by NIOSH in this area, although severely underfunded and limited, have brought to light dangers which industry could have known about years earlier.

2. **Recent activity is a cause for optimism, but concrete results have not been seen and could slow down or collapse.**

The public health goal is to reduce disease by reducing or eliminating dangerous chemical exposures. Hazard communication is a part of an organized program to reach that goal, not the whole activity. This past round of bargaining in the auto industry has produced agreements for such an organized program which we hope will be a pattern for the rest of American industry. Hazard communication programs and education for workers are a major component. These agreements also include commitments to fund and conduct research into occupational health hazards, to allow the union health and safety representative to participate in plant level hazardous

chemical control activities, and to permit the Union to review the hazards of new technology at the earliest stages. The UAW and some employers are now working at the cutting edge of scientific knowledge to understand and control potential chemical hazards. Many of these hazards were given to us by a chemical industry which has failed its responsibility.

There are other promising and exciting examples of situations where management has agreed to worker and union participation in solving occupational health problems. Each of these areas arose in situations where management recognized the need for an improved protective program and where the Union had sufficient bargaining power to assert its role.

Another good sign is that the public rhetoric of the spokemen for leading companies in the chemical industry has also shifted in recent months: They speak of the need for communicating hazards, for regulation of chemical exposures, and even propose strieter limits on some workplace exposures than OSHA now enforces.

We must emphasize that, despite the promises of this period, we haven't seen the results. And patterns set in major industries with strong unions are difficult to extend to other employers who deal with unorganized workers or unions who lack bargaining power.

3. **The OSHA Hazard Communication Standard is inadequate to meet the needs of workers and employers in chemical using industry.**

Actually, a lot of the activity around Hazard Communication has been generated by the storm of protest against the inadequate federal standard which was promulgated for the explicitly stated purpose of pre-empting state and local Right-to-Know laws. The continuing effort to pass such laws has kept the issue alive.

The problems with the OSHA Hazard Communication Standard are:

a. It gives chemical manufacturers too much freedom to decide which ingredients are hazardous and therefore trigger action;

b. Chemical manufacturers are free to choose the health warnings they will give to the users of their products;

c. Labels of containers don't have to show the real names of any chemical ingredients, even though the label is the only document which reliably gets into the work area and might be seen by exposed workers;

d. Trade secret provisions permit the identity of hazardous chemicals to be withheld;

e. Training requirements are vague and difficult to define or enforce;

f. The vast majority of American workers are excluded from even these minimal protections, including many in construction and service jobs with high chemical exposures.

4. OSHA's activity since the standard was promulgated gives little evidence that the standard will be enforced effectively, and gives little guidance in how to go about compliance.

Despite its shortcomings, the OSHA Hazard Communication Standard is a starting point for developing an effective program. However, with poor enforcement the standard also may give employers the option of trying to beat the system and do virtually nothing. In addition, deficiencies in data passed on by chemical manufacturers put a much bigger burden on unions in trying to negotiate effective programs with chemical using employers.

A number of OSHA staff are conducting training programs on the Hazard Communciation Standard. They do a sincere job, but the training is unsatisfactory because fundamental policy decisions have not been made.

To my knowledge, OSHA hasn't told anyone how to enforce requirements that chemical manufacturers pass on health information. If a data sheet leaves off information, who gets cited, and how do we make the supplier upgrade the sheet?

OSHA has yet to clarify what criteria are going to be used to determine whether a hazard warning on a label or data sheet is "appropriate," as required by the standard. Industry representatives have said they will rely on industry consensus standards (such as that of the American National Standards Institute) which they wrote themselves and which tend to reduce the warnings of chronic health risks.

OSHA representatives explaining the education and training for workers required by the standard have said that brief contacts by a foreman, on the plant floor and limited to a few minutes before or after a shift, may meet the requirements of the standard. In our view this would not be adequate training, and the tone of these comments implies that employers can easily beat the system with a minimal program.

This lack of activity by OSHA stands in contrast to the efforts being made in various states with Right-to-Know laws. For example, various states, including New York and New Jersey, are now writing data sheets on many chemicals. These data sheets are complete and contain up-to-date information on hazards of high use chemicals described in plain language which workers and supervisors on the shop floor can understand. One corporation has even incorporated the New York data sheets into its computer based chemical information system, so that when you call up the supplier's materials safety data sheet, you also can get the New York State explanation of the hazards of the ingredients.

OSHA isn't doing anything of this nature.

5. The central problem with implementation of the standard and program remains the behavior of the chemical industry.

For all the shortcomings of OSHA's response, it is industry which created the problem in the first place. There are claims that the chemical industry is already in compliance with the Hazard Communication Standard: I question whether the industry is in compliance internally, but chemical suppliers are certainly not in compliance with requirements to pass through information.

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The primary vehicle for passing along information is the Material Safety Data Sheet, a form with which the industry is supposed to be comfortable. These data sheets have simply not improved since the passage of the Hazard Communication Standard, and are not doing the job downstream in the chemical user industry.

There are two issues around which the system breaks down: intermediate suppliers and disputed information.

The chemical industry is not all giants, like Dow, DuPont, Union Carbide, and the major oil companies. Most of these big, primary producers of basic chemicals have disasters on their records, but they also have industrial hygiene and toxicology staffs which can keep up to date on the evaluation of the hazards of their products. They are the spokesmen for their industry, and also conduct the bulk of the public relations and lobbying which defends the practices of the hundreds of other producers who buy their primary products.

These less famous companies supply the coremaking resins that generate formaldehyde in our foundries, the urethane foaming components for making seat cushions, the paints in the car assembly plants, the cutting fluids in machining plants, and so on, for a nearly endless list of the thousands of chemical materials used to make a car. These companies write most of the data sheets our members see, and they give the impression that the corporate staffs don't know about up-to-date information, and don't want to know. It isn't clear that they are even passing along information they get from the bigger, primary producers.

As an example, I have attached to my testimony a sample data sheet which is currently in use for a degreasing operation. It conceals the identity of the chemical ingredients, and it lacks reliable health information. The chemical family to which this product belongs is associated with chronic organ damage such as liver, kidney and heart effects. Acute effects such as coma or sudden death have been suffered by UAW members. None of these are mentioned, and the ingredient is claimed to be proprietary. This poor quality and misleading data which our members have available is an obstacle to conducting effective training as well as controlling the hazard.

6. Currently developing negotiated programs with employers show a great deal of promise in improving conditions, especially if they get a pattern for other companies and industries.

This subject has been under intense and continuing discussion at least since auto negotiations opened last July. These discussions were very different than in the past, because control of chemical hazards is now a much more evident rank and file concern, and many local union officials have been active in campaigns for state and local Right-to-Know laws. Our company counterparts also recognize that workers have a right to know about the hazards they may be exposed to, and that efforts to control chemical hazards must be expanded. From the outset it was clear that OSHA's Hazard Communication Standard was just the bare beginning of an effective program. In this atmosphere, certain general principles about Hazard Communication program implementation are emerging.

First, an intense effort is needed to upgrade the basic information which we have to work with, the material safety data sheets and labels. Despite years of

trying to get this information from suppliers, employers have had to expand their efforts and still are spending a great deal of time demanding better information from chemical suppliers.

Second, effective control of chemical hazards requires that workers be informed of the hazards and methods of protection, and that workers initiative and involvement must be enlisted to implement and improve protective measures.

Third, supervisors are as important a target audience for information as the workers they supervise. Therefore, they are not the primary people to conduct Hazard Communication training. Effective training requires an instructor who can provide information beyond the minimal amount on data sheets and answer questions.

Four, training must encompass more than the traditional command to "follow the rules," and must teach workers their rights under the standard and other programs, how to recognize hazards, how to protect themselves and, where appropriate, how to improve their protections.

Finally, it is clear there is a great deal of work to be done if this activity is going to be effective in meeting the needs. Useful, plain language, balanced explanations of the hazards of chemicals for use in training efforts will have to be developed. There is an immediate need for the training of the trainers who will actually conduct the education programs in the plants.

The UAW is convinced that these programs are necessary, and is confident that they will improve the conditions under which our members work. We are uncertain

whether this pattern can be extended to situations where unions don't have bargaining power, or where management is determined to resist implementation of an effective program.

I will close with a very recent case history which illustrates the future potential of Hazard Communication to improve health conditions; this example shows the shortcomings of the federal standard, and the limitations of currently available information. One UAW Health and Safety Representative obtained a material safety data sheet for a rust remover. The plant was a parts depot, and therefore probably exempt from the federal Hazard Communication standard, but the employer had decided to apply its expanded Hazard Communication program there, as well, because it was necessary. Because of prior training and access to union and company safety bulletins, the UAW representative identified an ingredient in the rust remover, cellosolve, as potentially dangerous. Cellosolve is a recognizable name for a glycol ether, a possible reproductive toxin for which existing exposure standards are recognized to be inadequate. The material safety data sheet supplied by the manufacturer did not mention this toxicity, citing only skin irritation as a possible danger. Concern for this ingredient led to a request for a complete industrial hygiene evaluation of the dangers of the material as it was used. However, before the evaluation could be conducted, the supplier quickly reformulated the product to eliminate the glycol ether. The employer actually analyzed the new material to confirm that the toxic chemical had been in fact eliminated. Because the material was reformulated, the potential hazard was eliminated from many other user locations as well as the active one. Unfortunately, because chemical ingredients are not included on labels, there is now no convenient way a worker could know if the lot of the rust remover he is working with is the new material, free of glycol ether or the old material.

7. Summary

1. Chemical exposures are a more serious public health problem in the chemical using industries than in the chemical manufacturing industry itself.

2. Recent activity is a cause for optimism, but concrete results have not been seen and could slow down or collapse.

3. The OSHA Hazard Communication Standard is inadequate to meet the needs of workers and employers in chemical using industry.

4. OSHA's activity since the standard was promulgated gives little evidence that the standard will be enforced effectively, and gives little guidance in how to go about compliance.

5. The central problem with implementation of the standard and program remains the behavior of the chemical industry.

6. Currently developing negotiated programs with employers show a great deal of promise in improving conditions, especially if they set a pattern for other companies and industries.

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved OMB No. 44-R1367

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME [redacted] Corporation	EMERGENCY TELEPHONE NO. *(313) [redacted]
ADDRESS (Number, Street, City, State, and ZIP Code) [redacted] Hwy. Troy, MI 48084	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS CC-109
CHEMICAL FAMILY Chlorinated Hydrocarbon	FORMULA Proprietary

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS	100	350ppm	FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	165(74°C)	SPECIFIC GRAVITY (H_2O=1)	1.321 @ 25/25°C
VAPOR PRESSURE (mm Hg.)	100	PERCENT, VOLATILE BY VOLUME (%)	100 (essentially)
VAPOR DENSITY (AIR=1)	4.55	EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	negligible		
APPEARANCE AND ODOR	Colorless, ether odor, Liquid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) None of T.O.C., T.C.C., C.O.C.)	FLAMMABLE LIMITS	LEL 8.0	UEL 10.5
EXTINGUISHING MEDIA Water Fog, CO_2, Dry Chemical			
SPECIAL FIRE FIGHTING PROCEDURES Self contained respiratory equipment.			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: TLV - 350 ppm; MAC 500 ppm.

EFFECTS OF OVEREXPOSURE: Anesthetic effects - may occur in the range of 500 to 1000 ppm.

EMERGENCY AND FIRST AID PROCEDURES: Inhalation - if breathing stops, give artificial respiration. Get Medical help. Remove to fresh air, keep warm and quiet until recover.
Skin & Eyes - Flush eyes with plenty of water, for both skin and eyes get medical attention if irritation or injury develops.
Ingestion - Treat symptomatically. No known antidote

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Open flames welding arcs (can cause thermal decomposition producing hydrogen chloride and phosgene.

INCOMPATABILITY (Materials to avoid): Water - *Slow hydrolysis produces corrosive acid.

HAZARDOUS DECOMPOSITION PRODUCTS: Exposure to high temperatures or open flames generates hydrogen chloride, and very small amounts of phosgene and chlorine.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Small spills mop, wipe or soak up with absorbent material using proper protective equipment. Bury.
Large spills evacuate area, using proper protective equipment, flush spill to ground and let evaporate. Keep out of water supply and away from inhabited building. Bury away from water supply or allow solvent to evaporate to atmosphere at a safe distant From inhabited buildings.

WASTE DISPOSAL METHOD: Spread over large surface area and allow to evaporate.
Dispose according to Local, State, and Federal Regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Conc. above 2% use self contained breathing apparatus.

VENTILATION	LOCAL EXHAUST	X	SPECIAL
	MECHANICAL (General)	X (provide ventilation to control TLV)	OTHER

PROTECTIVE GLOVES:

EYE PROTECTION: Safety glasses without side shields.

OTHER PROTECTIVE EQUIPMENT: No special protective clothing required

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Handle with reasonable care. AVoid breathing vapors in concentrations over 350ppm with a maximum peak of 500ppm. Store in cool dry place

OTHER PRECAUTIONS:

Mr. MIRER. I would like to set hazard communication in some perspective. Before I go into my specific comments, the essential fact is that health and safety conditions have improved markedly for UAW members since the passage of the OSHA law in 1970. Injury rates in major UAW represented companies dropped by 80 percent over this period. Exposures to many known hazardous chemicals were shown to be reduced.

There improvements came as a combination of collective bargaining and the grievance procedure, Government standards and enforcement, cooperative programs with management, and upgraded company activities.

Despite these successes, many serious problems remain on the safety side. In the past year we have seen the numbers begin to creep up again. It is a matter of concern to us. However, most important, as the dangers of chemical exposures at work become better known, the result of new research, the gap between the preventive measures in place and the size of the task appears wider than ever.

The union's role is made more difficult, because the Federal Government under the Reagan administration has refused to assert its central role in reducing on-the-job hazards. However, despite this obstacle in Washington, the chances for improvement at the present time are good because of increasing understanding among workers and the public of the dangers and the means of abating them. In this atmosphere, at least some employers will work together with the union to put in place organized programs to control chemical hazards. We are confident these programs will be effective in the future.

Now, to the main body of my testimony, there are several key points.

The first point that has to be emphasized is that chemical exposures are a more serious public health problem in the chemical using industries than they are in the chemical manufacturing industry itself. The number of workers exposed is greater. Levels of exposure may be greater. And the control measures are often more difficult to achieve.

Mr. GAYDOS. Let me interrupt you.

Mr. MIRER. Sure.

Mr. GAYDOS. You are saying then that in the chemical industry, to manufacture it, you have less of a problem; after the item is manufactured and finds its way to packing and packaging plants, then in the use and the application, that's where the problem is, more so than manufacturing?

Mr. MIRER. That is our opinion, yes.

Mr. GAYDOS. What do you base that on? That is the first time that I have heard that distinction between the two. I always considered it as one situation. But this is the first time that I have heard anybody make that distinction. I am just wondering why you make it and on what basis you make it.

Mr. MIRER. The first point is that very few people actually are employed in the chemical manufacturing industry. I think about 100 people make all the Saran wrap that is used in the United States. So, the numbers of people are relatively small in the chemi-

cal industry compared to those who use those chemicals after they are sold and get out into the field.

Second, the routine processes in the chemical industry, especially in basic chemicals, involve closed systems, automated equipment, closed piping systems, and the like. Many of those workers sit in a control room for 7 or 8 hours of the day.

They do have serious problems during production upsets, maintenance, and other types of activities. But when the material is packaged and sent out into the field as a paint, as an adhesive, as a die mold release agent, as a cutting fluid, many more people are exposed. Often the levels will be higher, at least in the routine ones in the chemical industry. And it is much harder to control in some of our processes.

Mr. GAYDOS. There are valid facts that support that statement?

Mr. MIRER. Yes, that is my opinion from limited experience in the chemical industry and a lot of experience in metal working. And it has been brought home to us especially in recent years as a result of a series of studies, occupational health studies in our type of industry, some in UAW represented plants, some which we in the UAW have conducted. One of the early concerns was occupational cancer, which is easier to study, it turns out, than many other diseases. These relatively new studies have uncovered excesses of cancer among foundry workers, die cast and plating workers, workers in machine operations, in car assembly plants, electronics operations, welders.

The starting point was a finding of excess cancer among the model and pattern makers on the design staffs of the auto companies.

We basically covered quite a range of the types of plants we represent. The numbers represented in these studies are quite substantial and a very great concern to both us and management in our industry.

The chemically induced diseases other than cancer which we have suspicions of are less firmly grounded.

In addition to that, laboratory and clinical studies now emerging provide new confirmation of worries about exposure to other agents. These are situations where the exposure level in the industry is at or above the levels where occupational disease or other adverse effects are suspected or known. Examples are isocyanates. That was the chemical in Bhopal. Isocyanates are used to manufacture seat cushions like the one you are sitting on now. And there is a serious lung disease problem in those plants from exposure to isocyanates at low levels.

Glycol ethers are very commonly used, reproductive toxin. Formaldehyde, as you know, we are litigating, the question of a new standard for formaldehyde. Fluorocarbon solvents we testified on last year in connection with the General Dynamics situation.

Then there are about 12 to 20 other agents commonly used where the current health standard is recognized to be inadequate.

The problem is emerging now because of past grossly inadequate testing for toxicity of the basic materials of industry and an absence of research for health effects in people. That logjam has been broken. We are beginning to get activity.

That recent activity is a cause for optimism, although concrete results have not been shown. The public health goal is reducing disease by reducing or eliminating dangerous chemical exposures. Hazard communication is a part of that process, part of an organized program to reach that goal, but it is not the whole goal.

The last round of bargaining in the auto industry produced agreements to have a complete or more complete organized program which we hope would set a pattern for the rest of American industry. Hazard communication and education for workers is a major component. But these agreements also include commitments to fund and conduct research into occupational health hazards, allow the union health and safety representative to participate in plant hazardous chemical control activities, and to permit the union to review the hazards of new technology at earliest stages.

Despite the promises of this period, we have not yet seen the results. Extending the pattern set in major industries with strong unions, it is difficult to extend that pattern to other employers.

The third point is that the OSHA hazard communication standard as written is inadequate to meet the needs of workers and employers in the chemical-using industry. We have repeated this a lot. The detailed reasons are set out in full in my testimony, and I don't want to take your time by reiterating them here.

Despite the shortcomings of the hazard communication, it is a starting point for an effective program. It is at least a framework for starting discussion. However, the next problem is that OSHA's activity since the standard was promulgated gives little evidence that the administration intends to enforce the standard effectively and aggressively. With poor enforcement, employers can beat the system with a little bit of paper shuffling, and it will not serve the purpose.

OSHA's staff, a number of them, are now conducting training programs in the hazard communication standard. While they do a sincere job and represent the agency well, the training is unsatisfactory, because fundamental policy decisions have not been made, the most fundamental one of which is they haven't said how they are going to enforce requirements that chemical manufacturers pass on health information. The data sheet leaves off information. Who gets cited? Who gets the citation? And how is the supplier going to be made to upgrade the sheet?

In addition, they have yet to clarify what criteria are going to be used to determine whether a hazard warning on a label or a data sheet is appropriate as required by the standard.

Perhaps most important, when they explain the education and training requirements under this standard, these representatives are forced to say that brief contacts by a foreman or on a plant floor limited to a few minutes before or after a shift, that that kind of activity may meet the training requirements of the standard, even though in our view and most employers we work with, that would not be adequate training.

This lack of activity by OSHA contrasts to the efforts being made by several of the States with right-to-know laws that are actively trying to make the program work, for instance by preparing data sheets on chemicals that can be used by many companies. OSHA isn't doing that.

Having complained about OSHA, the central problem remains with the chemical industry and its behavior. Chemical suppliers are most definitely not in compliance with requirements to pass through information. The primary vehicle for passing on this information is the Material Safety Data Sheet. These data sheets have simply not improved since the passage of the hazard communication standard. They are not doing the job downstream in the chemical-user industries. We don't see any movement of them getting better.

You have to recognize that the chemical industry is not the giant, big primary producers of basic chemicals. It is not just that. Those companies are the spokesmen for the industry. They conduct the bulk of the public relations and lobbying. They spend a lot of their time defending practices of the hundreds of other producers who buy their primary products, reformulate them, and then sell them to our employers or use them in foundries and make seat cushions. There is a list of thousands of chemical materials used to make a car.

Those producers give the impression that the corporate staff doesn't know the hazards of a lot of these materials that they don't want to do and that they are not passing through up-to-date information. As an example of that, I attached to my testimony a sample data sheet currently in use in a degreasing operation. If you look at it, it conceals the identity of the chemical ingredients. It lacks reliable health information. The chemical family with which this product belongs is associated with chronic organ damage such as liver, kidney, and heart effects, acute effects such as coma. Sudden death has actually been suffered by UAW members using this material. And none of this is mentioned.

On top of that, the ingredient is claimed to be proprietary and concealed from the workers in that plant. It happens I can figure out what it is, based on information there because of my experience. But the ordinary worker, the ordinary employer would be out to lunch on that material.

My final point is that currently developing negotiated programs with employers show a great deal of promise in improving conditions, especially if they set a pattern for other companies and industries. The subject has been under intense and continuing discussion at least since the auto negotiations began last July. These discussions were very different than the ones we have had in the past, because control of chemical hazards is now a much more evidence rank-and-file concern. Many local union officials have been active in campaigns for State and local right-to-know laws.

From the outset it was clear that OSHA's hazard communication standard was just the bare beginning of an effective program. In this atmosphere, certain general principles about hazard communication program implementation are emerging, and I guess it should be clear that these are the UAW's ideas. I don't presume to speak for the auto companies and the auto companies we bargain with.

First, an intense effort is needed to upgrade the basic information we have to work with, which is the Material Safety Data Sheet and labels.

Second, effective control of chemical hazards requires that workers be informed of the hazards and methods of protection and that

workers initiative and involvement must be enlisted to implement and improve protective measures.

Third, supervisors are as important a target audience for information as the workers we supervise. They will be a target from the jointly active hazard communication programs that we are going to have.

Fourth, training must encompass more than the traditional command to workers to follow the rules. We must teach workers their rights under the standard and other programs, how to recognize hazards, how to protect themselves and, where appropriate, how to improve their protections.

Finally, and this is clear to all of us, it is very clear that a great deal of work has to be done if this activity is going to be effective in meeting needs. And that includes the union and the company recognize while workers have a right to know, we have a duty to tell. We have to work hard to have a program that is going to effectively do that.

We are convinced that these programs are necessary. We are confident that they will improve the conditions under which our members work. We are not sure this pattern can be extended to situations where unions don't have bargaining power or where management is determined to resist implementation. That is what we need an OSHA hazard communication program with effective enforcement for.

I would like to close with a very recent case history. This is a week ago as I was reworking my testimony. One UAW health and safety representative got a material safety data sheet for a rust remover. The plant was a parts depot and probably exempt from the Federal hazard communication standard, but the employer is extending his program to that anyway. Because of prior training and access to union and company safety bulletins, our representative identified one of the ingredients in the rust removal, Cellosolve, as potentially dangerous. Cellosolve is a recognizable name for a glycol ether, a possible reproductive toxin for which existing exposure standards are recognized to be inadequate. That is, the existing OSHA standard is recognized to be inadequate.

The material safety data sheet supplied by the manufacturer did not mention this toxicity. Concern for the ingredient led to a request for a complete industrial hygiene and hazard evaluation of the dangers of this material. That was communicated back to the supplier. Before the investigation could be launched, the supplier reformulated the product to eliminate the glycol ether, the toxic material. Because the material was reformulated, the potential hazard was eliminated from any other user locations as well as just the active one. Unfortunately, you know, if the material is out in the field under the same trade name, a worker now has no convenient way of finding out whether he's got the new stuff, which doesn't have the glycol ether, or the old stuff because there are no chemical ingredients required to be on labels under the OSHA hazard communication standard.

In closing, what I see as the optimistic piece of this is that we have the phenomenon of the highest common denominator which we hope is going to operate. That is, if pressure is put on a supplier to upgrade his label and upgrade the data sheet, they are not going

to do it for just one, we hope at least they won't do it for just one complaining union or just one complaining company, just to meet the requirements of one State right-to-know law. We hope that when they upgrade it, they will upgrade it for everybody.

If we can get that process rolling, we are hopeful that this process will work, that the information will get out, and that workers will be able to protect themselves better in the future.

Thank you very much.

Mr. GAYDOS. Thank you very much, Doctor.

Ms. Robinson, do you have a statement or remarks?

Ms. ROBINSON. No, sir.

Mr. GAYDOS. I want to welcome Mr. Hayes to the committee.

Let me ask you, Doctor, not that I want to belabor the point, but getting back to danger in the manufacture of chemicals. Let me just take one example, glycol ether. The plant which manufactures it has so many people working there. They manufacture the substance. It is shipped here, there, all over, and it is used in numerous manufacturing procedures, isn't it?

Mr. MIRER. It is a very common solvent used for paints, inks, and actually a lot of cleaners contain glycol ethers.

You may remember, there was a commercial a few years ago showing a pregnant woman cleaning her rug.

Mr. GAYDOS. Right.

Mr. MIRER. Well, many of those rug cleaners contain glycol ethers, many consumer products as well.

Mr. GAYDOS. My question is a practical one. If all of the chemical producers aren't inspected regularly—we have had testimony to that effect—how do you expect the standards to be applied and inspections to be made by OSHA in all the areas of proliferation, such as finding itself in 18 or 88 different products somewhere? How do we do that as a practical matter?

I am not justifying the fact that sufficient inspections are or are not being made when they manufacture the substance. How do you do this?

Mr. MIRER. You do it by setting standards which require the user employer to survey his operations, take air sampling, formulate a compliance plan, and educate his employees in the specific hazards of the material that is being used. This can be done on a basis of priority chemicals. We perceive there are about 20 of those which are in serious need of improved standards, that we know about. Or it could be done on a generic basis.

To get back to it, you can set standards that require employers to start the process rather than wait for the OSHA inspector to come in and do the inspection.

Mr. GAYDOS. As a practical problem, you say that is used in paint——

Mr. MIRER. Yes.

Mr. GAYDOS. Paint is set in a drum. Somewhere someone packages that drum, gallons possibly or half gallons or half drums. That in turn finds itself in a place where some workers are using that paint in painting an item or making the paint itself available in quarts. And then in turn, there is the individual using it. The proliferation becomes almost unlimited.

The practical questions I am asking—and every time we propound it to any of the witnesses, particularly from the administration, they just say, well, there is a certain limitation of personnel, the ability to follow through; the standard can be made, but impossible to enforce because of inspections and things like that.

The reason why I am bringing this up, you give me an answer—I thought maybe we might call on the insurance companies over here; I am sure along the line somewhere they insure the paint and the manufacturing enterprise that is using this paint to paint whatever they are making. That insurance company that provides protection on a paid premium, I think, would be maybe in a more sensitive position to do what you think should be done under the procedures you have set rather than anybody, even OSHA itself.

Is that a bad area to consider?

Mr. MIRER. Well, the insurance companies do provide a lot of the industrial hygiene and safety services which smaller employers use.

Mr. GAYDOS. I want to take issue with you. We have had a lot of witnesses in here who say that doesn't happen. You are just surmising that that takes place. They will get insurance without any kind of inspection, any kind of information being filed; and if you file it, I can file it, and nobody pays any attention to it. They will still provide the insurance because they are in the business of providing it based upon a premium.

We are not talking about whether or not the premium is high or low. We are talking about, hopefully—I think we are both talking about the same thing——

Mr. MIRER. Yes.

Mr. GAYDOS [continuing]. Of doing away with that danger to the person, aren't we?

Mr. MIRER. Right.

Mr. GAYDOS. My probably very clumsy suggestion to you is that I think the more effective, the more practical agency or entity that would help us in this quest to protect people and the worker might be the insurance company more than anybody else. That is just my feeling on it. This is based on many, many years of testimony here from insurance people. This committee had at one time jurisdiction over the Longshoremen's and Harbor Workers Act. We had the insurance premium question present itself. During that series of hearings, we had so many people in, telling us as to what kind of a form they filled out before they qualified for insurance, who make the inspection, you know, was the premium so high that it was almost confiscatory because nobody but nobody was correcting the thing down below, which would hopefully ultimately end up in a lower premium rate. Everything was going sky high.

It's like inspecting for fire insurance. It is only lately now that you are getting some half-decent inspection. You know, they look at a building now. Before, you'd go down to an agent and he'd write you an insurance policy.

You know, you can talk and you can suggest, and I think your suggestions are well founded on what has to be done: education, take a look at the right-to-work laws of the State. If they are more prohibitive or better protective, we should follow those. Of course, that gets into the philosophical distinction of who should have the

ultimate control, whether it should be Federal or local people. And if one State does it, maybe another State won't do it; and you're right back in the soup again because some States like to do it and some don't. If we pick up one philosophical theory, we may not have it available in another State.

The reason why we passed the act, we said we want a strong Federal act, it was based upon the presumption of those who supposedly knew at the time and their conclusions at the time that, if you don't have a strong Federal act, you are going to delay standards. You're going to have all kinds of conflicting types of things between States. One's a good State, one's a bad State. And all those things were argued. So, we said, let's make a strong effective act. Let's finance it and make sure that it is well funded. Hopefully, theoretically, and philosophically we would have an act that is going to work, regardless of what the particular feeling in any individual State is or was at that time. That was the feeling behind it.

Now because of a reluctance on the part of the administration, as I see it, the value of States' rights have reappeared and reemerged, and that's the way to go. I don't know if we can change direction in the middle of the stream, you know. It's going to be pretty difficult. I don't know, maybe one State will do it, and maybe another one won't, I don't know.

Those are some of the observations that bother me as a member of this committee over the years.

Mr. MIRER. The UAW has always supported the notion that strong, effective Federal enforcement was the way to go in this area and that State by State activity in State plans had major problems. And we still believe in that principle.

That principle bumps up now against another situation, where OSHA holds an information gathering hearing on formaldehyde. The companies that make it come in and testify that they employ a lower standard internally for exposure than OSHA currently enforces. And we still can't get a stricter OSHA standard against formaldehyde after 4 years of litigation and yelling and screaming in the media.

So, the labor movement has fallen onto State and local right-to-know ordinances dealing with this particular problem as the best alternative that we have available to us at the present time.

Mr. GAYDOS. And that's what your position is?

Mr. MIRER. We haven't changed our philosophical position, but you bend to the immediate reality.

Mr. GAYDOS. I note in your testimony that you said—and I think you have said it quite clearly—that OSHA has been less than aggressive in pursuing its goals, in your opinion, of reducing workplace hazards, particularly in this instance. You have given us some specific instances where death or injuries have occurred as a result of this laxity.

Does your statement pertain to and cite other areas chronologically? Is there any point you want to make, emphasize a situation? Forget about Bhopal and all those places.

Mr. MIRER. My testimony is directed specifically to right-to-know——

Mr. GAYDOS. To right to know.

Mr. MIRER [continuing]. And their activities on hazard communication. I didn't come prepared with a series of specific enforcement problems that we have had lately.

As you know, we discussed a particular situation at quite some length last year. I have to say that, after that unpleasant experience, those enforcement situations where the UAW International has been directly involved, we have not had problems to that degree since.

But on hazard communication, the situation continues. There are many initiatives which we feel OSHA could take at the present time to both ensure that the standard will work and also to give employers the message that they intend to enforce it and that minimal programs are not going to be acceptable.

Mr. GAYDOS. You mentioned those in your statement.

Mr. MIRER. I mentioned those in my statement.

Mr. GAYDOS. They are pretty well put forth, too, I might say. I think they are practical, too.

Could you address yourself, before I ask some of my colleagues if they have any questions, to my observation or my feeling, whether it is justified or not, as far as the insurance business or corporations in this country are concerned? Could we use them in our quest for safety and health? How could we use them? Or do you think it is a lost cause or that I am barking up the wrong tree.

Mr. MIRER. Well, the mechanism that people think of to make the insurance companies take a more active role is essentially to have them bear the cost of injuries and illnesses more directly or impose additional requirements on workers compensation carriers. I think that certainly deserves attention in the same arena as we think about improving workers compensation laws and product liability rights in conjunction with toxic chemical exposures.

Mr. GAYDOS. You have been around a while. Are they doing anything——

Mr. MIRER. Insurance companies?

Mr. GAYDOS. Yes.

Mr. MIRER. The insurance companies——

Mr. GAYDOS. Or going through the motions?

Mr. MIRER. I mean, we have had this in discussion with insurance company industrial hygienists in the workplace. Their consideration is, will we have to pay a claim arising out of this exposure? And some of them say it directly in their conversations and in their report.

Mr. GAYDOS. Is that the purpose of their whole existence?

Mr. MIRER. Well, that's what their—aside from their professional responsibility as an industrial hygienist, their purpose in working for the insurance company is to identify a place where they are likely to pay a claim.

Mr. GAYDOS. When they have no expertise nor care to develop it——

Mr. MIRER. They have expertise, and sometimes they apply it. No blanket condemnation of that group of people but——

Mr. GAYDOS. Have you ever heard of an insurance company ever saying, "Well, you're going to get a surcharge on your premium because you're handling some dangerous chemical of some sort; and if you continue to handle it, unless you put these types of rules into

effect, you're going to pay another 30 percent on your insurance premium?" Did you ever hear of that happening?

Mr. MIRER. I have never heard of that. It may have happened, but I haven't heard it.

Mr. GAYDOS. Couldn't they be a policeman?

Mr. MIRER. They could.

Mr. GAYDOS. Could very well be.

Mr. MIRER. They could.

Mr. GAYDOS. Mr. Hayes?

Mr. HAYES. Thank you very much, Mr. Chairman.

I arrived late and didn't hear all the testimony. I have just been going through it as you were questioning the witness.

At the risk of maybe being a little bit stupid, I may raise one question of you, Doctor. You mention in your prepared statement, in fact in your point six on page 14, you say: Currently developing negotiated programs with employers show a great deal of promise in improving conditions, especially if they get a pattern for other companies and industries.

Mr. MIRER. Yes.

Mr. HAYES. Who do you see establishing that pattern?

Mr. MIRER. Well, we think that we have the beginnings of that pattern in the oil industry at the moment, as a result of pattern-making, collective bargaining agreements we achieved last September. We are actively working together now with those employers to develop hazard communication programs, how they are going to implement their hazard communication programs in order to make them effective and to serve our needs.

We are going to be developing our own materials for training. We are going to be training people at the plant who will conduct this education program. And we are going to be backing it up with sufficient technical expertise to answer people's questions in the plant.

I think when we do that, we will have something that is really going to serve our needs and have the effect of improving conditions in the workplace. And we hope that is a pattern, but we do not know if it is going to go into smaller employers or get beyond our industry. You know, it could come apart. It could come apart in our industry, in our major employers as well. But we are confident about that working.

Mr. HAYES. Has there been any indication of a willingness of the employers with whom UAW is negotiating as to improve the line of communication which will increase the worker's right to know based on what is hazardous?

Mr. MIRER. Some major employers, yes, very definitely; other employers, very mixed. With other employers, it is a very mixed experience.

It happens that the places where we have bargaining power are the places where it has been the most effective. Those are also the facilities where we have the most evidence of a need for good effective hazard communication programs.

Mr. HAYES. There is usually, just from outward appearance—and I don't know too much about the auto industry—but whenever a catastrophe occurs, then the interest of doing something tends to

rise; but as soon as that is settled, so what, you know. The tendency seems to be to start back to doing business as usual.

I have been watching with interest this situation that developed in India, where all those people were killed. And I am watching the out that the chemical company may eventually find. So they pay some money, but I doubt whether there will be any root solutions to the problems that would avoid the reoccurrence of these kinds of catastrophes.

I just don't know if you have any comments on that or not.

Mr. MIRER. Well, I think that if—see, I agree with you that we get action after a catastrophe occurs. You know, when we focus public attention on a problem, the public tells the Congress take care of this. A law is passed. Something is set up. An activity begins to occur. And then, you know--sometimes if attention goes away, we can slip back to the old way of doing business.

I think it is important for people to recognize that there have been improvements as a result of the OSHA law. There have been some improvements as a result of the Toxic Substances Control Act, although neither has gotten everything that we need done.

It is not hopeless, but there needs to be continuing pressure and oversight and activity, or else it does slip back.

Just to give you some firm—on the injury side, we had, since the OSHA passed—I mention it in my testimony—major improvements in the injury experience in our major employers. A big improvement, 80 percent, it dwarfs anything that has ever been talked about in the Bureau of Labor Statistics' changes. That is a result of a coordinated program and constant attention and pressure.

Mr. HAYES. Of course, the bottom line is—after this question, Mr Chairman, I will be through.

On the funding for OSHA, unless there is a change in outlook on the part of the administration, it may be really jeopardized. The direction that things seem to be going now would indicate that we have got to begin to apply some real heat and pressure to make sure we keep what we've got and try to expand upon it in the way of worker safety through OSHA.

Mr. MIRER. Absolutely.

Mr. HAYES. Thank you.

Mr. GAYLOS. Doctor, before I call Mr. Murphy, so many people have taken that position publicly, and most of the ones taking that position are those that are most ill-informed. They are saying, in so many words, that this committee isn't doing enough to make the administration enforce what standards they have and also to pass some standards pursuant to the terms of the act that are effective and that would do what you want them to do.

A lot of people are saying that. And that's always the case, you know, easy to point a finger, easy to criticize. I am asking you—I don't want to put you on the spot like we've been put on the spot. But I am asking you, what specifically would you expect this committee to do, under the circumstances as you know them, that we aren't doing or haven't done already? What course would you think would be the most effective course for us to follow?

Do you want to address yourself to that, or do you want to take the position that it is our problem and not yours?

Mr. MIRER. Well, I don't pretend to be an expert on the congressional process or interaction between the congressional committee and the agency overlooking that——

Mr. GAYDOS. First let me ask you a question. Do you share that consensus of opinion that seems to be crystallizing?

Mr. MIRER. I try not to give opinions where I don't think I am an expert.

Mr. GAYDOS. All right.

Mr. MIRER. We don't expect you folks to go into the plant and write the citations, take the air samples, and then go to—although many of you may be attorneys, we don't expect you to go prosecute these cases after they are formed.

I would like to address myself to what needs to be done to make this program. That is the same kind of thing that we do internally. There has to be continuing dialog and oversight as to how OSHA and the related programs like Toxic Substances Control Act are interacting with the workplaces, with the conditions in our workplaces and improving them.

And this continuing round—it is not a process that happens once and is done. It is a continuing oversight process that has to be maintained so that there is a dialog between the critics of the agency, the agency, and the Congress that has to oversight it. And the role, what I would see as the thing we need is to create that arena where the dialogue occurs. Otherwise, we raise criticisms that are not answered. Defenses are raised which we have no chance to analyze and discuss. And the system goes forward as it has for the past 4 years, which has been very unsatisfactory, at least in terms of opportunities for improvements which were missed.

Mr. GAYDOS. I was very surprised to hear you say that—well, not surprised, but maybe I want to be complimentary to you, to hear you state, knowing your position and who you represent, to state that, gee, the health field is 80 percent better than it has been since we passed the act 15 years ago.

Did I understand you correctly?

Mr. MIRER. No; let me try and correct that.

The injury rates in the major employers—we're talking basically auto industry and, to some degree, major agricultural implements—those rates have gone down 80 percent since the law was passed and we had our pattern-setting bargaining in 1973. We believe——

Mr. GAYDOS. But if it has gone down 80 percent——

Mr. MIRER. Those are injuries.

Mr. GAYDOS [continuing]. That's 80 percent better?

Mr. MIRER. It's 80 percent better, yes.

We believe that our statistics are more reliable than the Bureau of Labor Statistics has published because we—the Bureau of Labor Statistics samples, we collect all the data. The Bureau of Labor Statistics is not able to verify the data. We do spot checks. And we are dealing with employers who know how to keep those records.

Be clear, that's limited to about 350 major plants. They probably employ 700,000 people, a big chunk of the manufacturing labor force, if not the whole world. We think there's a lesson there. The program can be made to work.

Mr. GAYDOS. Can be made.

Mr. MIRER. The program can be made to work and be successful. Another point——

Mr. GAYDOS. Well, it has worked, to a certain extent.

Mr. MIRER. Yes, right.

Mr. GAYDOS. I would hate to think that this committee is in existence for no purpose and that the act we passed 15 years ago, you know, is just a piece of paper. It has worked, hasn't it?

Mr. MIRER. It has worked. Nobody seems to be interested——

Mr. GAYDOS. Nobody has told me that ever. You know, nobody wants to get on this committee. Nobody ever stands up on the floor of the House to defend the budget, you know, the position of the committee on the budget. You know, Joe Gaydos or maybe one other member of the committee is left to fend for himself on the House floor. Everybody avoids this committee like it's a plague. It must be politically unacceptable or something.

I always thought that if you try to protect somebody's working conditions and the health of an employee, a family man, because he had to go back home and keep five kids fed and put them in college and buy the furniture and buy a house and things like that, I always thought that was a great thing to do. But I found out just the contrary. You know, it's bad things.

Mr. MIRER. Let me pay you two other compliments—well, one compliment and then raise one problem.

If you look at the battery industry today, we represent a substantial number of people who make the car batteries. When I came into the business in 1975 and we began to collect data there, we found that every major plant was in violation of a voluntary standard set in 1937 by the U.S. Public Health Service. Eighty percent of the workers in the battery industry had lead in blood levels. That is lead in their body above the cutoff point, 40 micrograms, where you begin to see effects. Many of them were way above that.

OSHA began to enforce the old standard. OSHA passed a new lead standard. The industry came in crying that they could not possibly meet it, it would wipe them out of business. In the battery industry today, a lot of plants, 80 percent or more have now blood leads below the cutoff, where you don't have to worry about problems. Some of these plants have come into full compliance with the standard years before the standard required them to do it. They did it by installing new technology, which is not really very new but it's much more productive than the old technology. People in the battery industry will tell you they don't believe what the conditions are.

There is more to be done, but that's one of the success stories that nobody knows about.

Mr. GAYDOS. Yes, I can understand that. But on the other hand, let me be the devil's advocate. I can take you up and down this country. Based upon the indisputable statistics, 80 percent of the people that earn their livelihood earn it in small business, as distinguished from large business, which is primarily unionized. I can take you in every junkyard up and down, in my old hometown, and I'll show you the fellows who are sleeping with batteries all over the place. And this standard is not being enforced, as far as they're concerned because they are mom and pop operations. A man with

his son, and even a daughter involved, went out there, cannibalizing automobiles and taking batteries out and using them and operating them and smashing them up and reprocessing them, and things like that.

I am just talking about one little instance. Where we have unions, you know, my conscience doesn't bother me because whether they do a hundred percent job or not is open to debate. But I know this: they are trying, and in most cases they have been very effective. If unionism was ever justified to any person at any time under any circumstances, in my mind the one greatest justification would be that a person working in a union shop has the benefit of expertise and professionalism and an organization that will fight for their health rights, which they don't have in other areas.

We have traveled over the country and gone into all these small operations, whether they are involving the limestone industry and what have you, and where they have radon daughters all over the place, floating around those mountains. All these things, they are all two or three person operations.

My feeling, as far as the union is concerned, if it has any justification, that is its one justification. But I still have great concern because of that 80 percent figure, which hasn't deviated. Most people don't work in union shops. Statistics show that, any way you want to cut it.

Let me ask you one question. Here I am, talking, and I shouldn't be. Are you suggesting we take this standard and bring it back, take a position to ask that this standard be brought back, reworked, changed, and then send it back out? Or do you think the standard per se is all right the way it is constructed, and it just needs a better application? What is your position on that?

Mr. MIRER. We think the hazard communication standard is severely deficient.

Mr. GAYDOS. Severely deficient——

Mr. MIRER. And that it ought to be improved, and that process ought to go on. Maybe the most effective way we see the option available to us in the union movement is State and local right-to-know laws that build on it and fill in the gaps. And that is what we are trying to do.

At the same time that we are looking at ways of improving the standard, what we have got ought to be enforced vigorously. There ought to be a clear message to employers and chemical manufacturers that what is out there is going to be enforced and that they are going to have to meet it. The vagueness in that standard is going to be resolved in the direction of worker protection.

Mr. GAYDOS. Mr. Murphy is from a district adjoining mine. I think we have problems that are common to both of our districts. They are semirural, some manufacturing. It's a mixture. I am sure he will have some questions.

Mr. MURPHY. Just one, to follow up on what Mr. Gaydos was talking about, your union, of course, is powerless to force the small businesses because you don't negotiate, you can't negotiate a contract with them. There is nothing you can do.

In many of these small businesses, the owner, the boss, the head of the family, he works right in the business. As Joe said, maybe he has three or four people in the garage or the shop, or five or six.

They are complaining about the bill that the chairman has introduced which is, I think, a good measure, 1309, which I encourage you to examine and which we will be getting into some hearings on. But I have heard from the small operators: gee, you know, how do we know what's hazardous? The guy's working with it himself.

The bottom line of my query to you is, is either OSHA or are the unions doing anything to educate the shops, even the nonunion shops, and the public? It is perhaps OSHA's responsibility to go in and tell them, these are hazardous substances; here's how you inform not only your employees but yourself to provide this protection right down to the level, the individual worker needs as much protection as the guy that works in the 3,000-man shop.

What can we do or what is being done by either OSHA or the unions to educate the small business people as to the hazards of some of the materials they are working with?

Mr. MIRER. Well, I guess the first thing that OSHA did in the direction of educating workers in small shops and other employers in small shops, the first thing that this administration did was they gutted the New Directions Program, which provided grants to universities, unions, and employer associations to conduct education. The program went from $7.5 million a year, which was grossly inadequate, down to—I think it went from $13 million a year down to two. So, that's what the administration has done to educate those people in safety and health hazards.

Mr. MURPHY. Now when we come back with a mandatory imposition, the administration is going to oppose that, too.

Mr. MIRER. But I would call your attention to that Material Safety Data Sheet that I attached to my testimony. That is what the small employer gets from his chemical supplier. If you look at that Material Safety Data Sheet, remember that we had an experience in a big plant where two workers died in a pit because that material was not handled properly. That material is now being tested by the National Toxicology Program for carcinogenicity. That material does have liver, kidney effects. And that is the information that the small employer gets.

So, the next point is that making hazard communication work, even within its own terms, is critical for the small employer because the only contact he has with expertise in many cases is getting that data sheet.

The answer to the problem that you raise is, you know, there have to be more effective education programs. We have a lot of experience with how to do them now, and they need some more juice behind them, more funding to make them work.

Having said all of that, we represent workers in small shops as well, probably more small shops than big ones. They just have fewer employees in them. We vigorously opposed all exemptions based on size.

Many of those small—I mean, you can't generalize, but small employers are not a lot more receptive to health and safety demands, even when they work in the shop, than anyone else. In fact, you have an owner who figures he is exposed to the same hazard as his workers, he may figure I don't care. It's not I don't care. I'm exposed to it. I'm not worried about it. Why should they be?

Mr. MURPHY. It hasn't killed me yet, so it's not going to kill anybody else.

Mr. MIRER. Yes, why should they worry about it? I breathe that air myself.

In fact, when I worked for the State of Massachusetts as an inspector, we had this battery plant in our files, where the only three people who worked there where brothers, the owners. They had horrible blood leads, hospitalized. And they just kept on doing it. It was their business. They kept on doing it.

Mr. MURPHY. They didn't want to be protected.

Mr. MIRER. No.

Mr. MURPHY. Thank you.

Mr. GAYDOS. We found out when we had the incident down in the James River with Kepone that all the treatment consisted of was a chelating agent, whereby they would give them a shot every now and then. This chemical would chelate the lead in their blood. It would eventually help them rid their system of the lead. But that is the only treatment they had.

I don't know if again I am following the wrong trail. It seems to me that we are going to have to, one way or another, call in the insurance people, those that have always been in the forefront. We have to call them in to help the unions in their educational programs, to help the administration to administer, to educate you. I think there should be a lot more work being done by them as far as educational programs and coordination. They are earning a livelihood and justifying their existence under the circumstances. They have a certain responsibility. I don't know whether or not the administration alone, even if we had a hundred percent desire to want to enforce the act to the nth degree, I don't know as they could do it if you don't have the cooperation of everybody involved.

Mr. MIRER. I think it's a good idea. You ought to call them in and ask them what they're doing, and what their view of the problem is, what their view of OSHA is.

Mr. GAYDOS. Well, it's very difficult. They are not organized. They do have some sort of an organization, but——

Ms. STRUNK. They sure do.

Mr. GAYDOS. Yes, but they——

Mr. MIRER. Hold a hearing on workers compensation.

Mr. GAYDOS. I don't know, who's going to be the spokesman?

Ms. STRUNK. If you hold hearings on H.R. 1309, I am sure the insurance industry would volunteer to testify.

Mr. GAYDOS. Well, we will be doing that.

I want to thank you.

Does anybody have questions? Yes?

Ms. STRUNK. I just have a few questions, Mr. Chairman.

Doctor, you mentioned the New Directions Program. I just wondered whether the UAW is now or was a recipient of a new directions grant.

Mr. MIRER. We were.

Ms. STRUNK. Did you use that money to educate workers in hazards they have been exposed to?

Mr. MIRER. Yes, we did, as best we could.

Ms. STRUNK. Would you be kind enough to briefly explain to us what kind of program you did have to educate the workers?

Mr. MIRER. Right; we were in the first wave of recipients of new directions grants. We felt that the place where they ought to be directed most intensely was to our workers in smaller shops and smaller employers, although many of these were major, would be considered major employers outside of our arena.

What we did was, we felt it had to be a broad-based program. So, we had some national staff, but we selected, eventually it was 50 or 60 local union representatives and trained them to be discussion leaders, in other words, trained them to put on health and safety classes. We developed a core set of training materials which were based on some materials developed by Ohio State University labor program service and then some materials that we developed on our own. We trained those local union discussion leaders.

They then went back to their regions and were set up to conduct classes in local unions.

It was an effective—in addition to that, these discussion leaders also took part in the continuing education program that our union has for the membership. Every region of the union has a summer school every year. Health and safety courses were put on there. We have a major educational facility in northern Michigan, a family education center in Black Lake. Health and safety classes are put on there, more or less, continuously through the spring and summer. And all of that has come back to fuel the program that we have now.

We lost the grant. That particular component of the program has kind of lost steam.

One of my laments now, in terms of reaching large numbers of workers, I think if we possibly had the staff to do it, we could go around to employers and ask to put on joint programs on certain materials; and we would get acceptance. We have done it in lead and probably could do it for other things. But we just don't have the support to carry it out.

Ms. STRUNK. Did you support the previous administration's hazard communication standard?

Mr. MIRER. In part. We had some criticisms of the way that it was constructed, but we supported it in general, yes.

Ms. STRUNK. What provisions of that standard did you not support?

Mr. MIRER. Well, actually, we felt that it was drafted in a way that would make it—it was drafted in a way that it could be easily attacked, even though it was a good standard.

Ms. STRUNK. Was the scope of that standard the same as the scope of the current standard?

Mr. MIRER. Yes.

Ms. STRUNK. You mentioned enforcement, this administration's enforcement of the hazard communication standard. But isn't it premature to judge their enforcement, since the standard is not in effect yet?

Mr. MIRER. The way you judge the enforcement is by their plans for how, their announced plans for how they are going to carry it out. We have had OSHA representatives conduct training for company and union together on several occasions. When you ask them the key questions, they don't have answers.

Now, it is true that the data sheets—we are in the chemical user industry. Therefore, our employers are right now trying to gather data sheets on which to base their programs. They have—November 1985 is the effective date for those data sheets to be in compliance with the standard. At that point, General Motors, for example, has between May 1985—I'm sorry—November, 1985 and May 1986 to train 400,000 people exposed to tens of thousands of different chemicals in what the hazards of those materials are. The fact is, if you had to do that based on chemical industry materials that were being supplied and you weren't going to get those materials, that information until May, between November and May, it can't be done. You cannot do it on that basis.

So, the failure to start bringing the chemical industry into line before the actual day when you can write citations is a failure. It makes it impossible for the downstream employers to conduct a program, if we were going to cast it that way.

Ms. STRUNK. Thank you very much.

Mr. GAYDOS. I allowed counsel to ask some questions because, unfortunately, we didn't have Mr. Chandler here. I want you to know that I have been subjected to being interrogated by the staff in an argumentative fashion. [Laughter]

It is not the procedure of the committee, nor will it be, but I do want you to understand that I thought it was essential. I have always extended that courtesy to the minority when their member can't get here to ask some pertinent questions as such.

Let me conclude by stating that as I interpret your remarks, if you had money, from a practical standpoint, money, you could do a better job. Is that what I have gleaned from what you have said?

Mr. MIRER. Well, in general, better funding of New Directions programs and perhaps a more objective review of the quality of those programs would help us, would help the public health community in general, not just the UAW.

Mr. GAYDOS. You are concluding that when the money is made available you have used it, and you think the results justify the use of the money?

Mr. MIRER. Yes.

Mr. GAYDOS. Mr. Hayes.

Mr. HAYES. I have just one.

You mentioned in your statement—just a very brief answer, and I will make the question very brief—that it sort of implies that the giants in the chemical industry are sort of insulated. How do you get at them? Is there a way? Is there legislation? Do you think even what you are proposing, the strengthening of the current statutes, will improve our abilities to really get at the big people who use the toxicologists and other people as buffers?

And they are not subjected to the kind of criticism or the kind of investigations that might reveal their real role. Maybe we can develop some really organized approach to corrective legislation.

Mr. MIRER. Well, I think the general answer is to bring them before committees such as this and ask them to explain themselves. Ask them to respond to the criticisms that other people in the community have.

Mr. HAYES. Why wouldn't they send somebody, you know, you're a doctor—UAW is not here, but you're here, you know. Why wouldn't they send one of theirs?

Mr. MIRER. Well, that's—I mean, that's the forum in which they have to answer to the Congress.

Mr. HAYES. I have no problem with your suggestion. But do you subpoena them?

We have no subpoena power, do we?

Mr. GAYDOS. Yes, we do.

Mr. HAYES. All right.

Mr. GAYDOS. I want to thank you for your testimony and for your quite comprehensive written statement, which is part of the record. I think it is an excellent piece of work, to be very frank with you.

Mr. MIRER. Thank you.

Mr. GAYDOS. It is somewhat frustrating as to agree how to proceed to effectuate what we both think and believe is essential, and which isn't happening. I guess the administration has its problems, too, because of budget constraints. And everybody seems to be budget conscious throughout the country. I guess possibly that might be one of the reasons. But we are dealing with human nature, and once an error is made, and because of budget restraints, there are going to be some dire consequences when people are involved. You know, I guess everybody forgets about them.

But we will try to do our best. I want to thank you for taking the time out on behalf of the union, yourself, and also your colleague for testifying before the committee. It was most valuable testimony.

I ask you to remember, don't be too concerned about the fact that the other members are not here. I think we have made the record. It is available for the study of the whole Congress and in particular the subcommittee members and the full Education and Labor Committee. So, it's not going to be wasted. I want you to know that.

Thank you so much for your appearance.

Mr. MIRER. Thank you very much.

Mr. GAYDOS. The meeting is adjourned.

[Whereupon, at 10:45 a.m., the subcommittee was adjourned, subject to the call of the chair.]

OSHA OVERSIGHT—WORKER HEALTH AND SAFETY IN THE MANUFACTURE AND USE OF TOXIC AND HAZARDOUS SUBSTANCES

WEDNESDAY, MAY 1, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND SAFETY,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2257, Rayburn House Office Building, Hon. Joseph M. Gaydos (chairman of the subcommittee) presiding.

Members present: Representatives Gaydos and Chandler.

Staff present: Sy Holzman, deputy staff director; Lee Bassford, staff assistant; Dorothy Strunk, minority senior legislative associate; and Peter Morgret, minority legislative associate.

Mr. GAYDOS. The committee will be in order.

As we continue the subcommittee's oversight hearings on OSHA's hazard communication standards, it becomes more difficult to isolate that issue from two others with which this subcommittee is currently concerned—the right of workers to know when they are handling toxic and hazardous substances and developing means to identify those workers whose risk of death or debilitation is greater because of exposures to substances in the workplace.

As regards the second issue, I have introduced H.R. 1309, which provides for the identification and notification of workers at high or increased risk of death or disability because of diseases directly linked to toxic substances in the workplace. Specific hearings on that measure will be scheduled later this year.

Yet, while there may be references to that proposal today, the primary focus of this hearing is OSHA's hazard communications standard, with particular emphasis on whether it will do what was intended when the rule was promulgated: Reduce the chances of death or disability in the workplace because of exposure to toxic substances.

The witnesses today include Vicky Heza, of the United Paperworkers International Union; a panel including David Mallino, of the Industrial Union Department, AFL-CIO, and David Ortlieb and Salvatore Falletta, respectively the health and safety director and general counsel for the International Chemical Workers Union; and a second panel including Dr. Lamar Priester, a physician specializing in occupational medicine and former commissioner of the South Carolina Department of Health and Environment, and three former workers at the Blackman Uhler Chemical Co. in Spartan-

burg, SC, who, because of exposures, are having various medical problems currently.

So the first witness we will call is the United Paperworkers International Union. Welcome to the committee, Ms. Heza, and if you have anybody with you to testify——

Ms. HEZA. No.

Mr. GAYDOS. Are you alone?

Ms. HEZA. Yes.

Mr. GAYDOS. All right, then, without objection, at this time, we will include in the record of these proceedings your statement as formally presented. So ordered. If you wish, you can sum your presentation or give it in detail. It is up to you.

STATEMENT OF VICKY HEZA, INDUSTRIAL HYGIENIST, UNITED PAPERWORKERS INTERNATIONAL UNION

Ms. HEZA. I spoke to Sy Holzman yesterday and he suggested that I summarize it, which I have done, so I will not be reading it verbatim.

My name is Vicky Heza. I am one of the two industrial hygienists with the United Paperworkers International Union, department of health and safety. I am testifying on behalf of my colleagues in that department on behalf of Wayne E. Glenn, who is the president of the UPIU, and on behalf of the 265,000 members of the UPIU throughout the country.

This testimony was written jointly between myself and our occupational health specialist, Claire Sullivan. There are three major points I would like to make about the Federal hazard communication standard today. These points all stem from our feeling that it fails to provide standard criteria for identifying hazards; it fails to provide standard criteria for communicating these hazards; and it fails to achieve a proper balance between employers' needs to protect trade secret claims and society's needs and responsibility to protect workers' health.

Let's first turn to the issue of standardizing hazard evaluation. Currently, chemical manufacturers are required to evaluate and report on physical and chemical properties of chemicals that they produce, manufacture, and distribute to employers and are also required to report and evaluate toxicological effects on animals and humans. However, chemical manufacturers do not have definitive guidelines to go by in determining these toxic effects.

For example, some of the issues that are not always addressed by chemical manufacturers are the various sources of exposure, the various routes on entry into the body, the duration of exposure, whether you are talking about minutes, days, weeks, months, or years, and the magnitude of the exposure. None of these are requirement of toxicological determination.

Much of what we know about the chemicals that we work with today and the ones that are regulated by OSHA has been almost as the result of epidemiology many times, because of clusters of cancers or clusters of sterility, for example, it comes to the attention of chemical manufacturers and researchers that a particular chemical may cause health hazards previously unknown and then the chemical is looked at further. But these clusters of occupational disease

would probably not occur if there were definitive guidelines established in the first place to determine what the toxic effects are of these chemicals.

In other words, while the standard ensures communication of know hazards associated with particular chemicals, the fact is that the quality and consistency of toxicological data can and does vary from manufacturer to manufacturer.

Also, the trade secret provision of the Federal hazard communication standard can have a negative impact on hazard evaluation. You know that the Federal hazard communication standard leaves it up to the manufacturer or employer to decide what is or is not a trade secret. Although it does require that while the identity of the chemical may be withheld, the health hazard information be communicated to the worker.

The problem we have with that is without knowing the identity of the chemical, how can the hazard assessment provided in the material safety data sheet be verified? The trade secret provision raises another issue. Let's say 5 years from now a specific chemical, the identity of which has been withheld from a worker under the trade secret provision, is identified as a carcinogen and let us assume that the worker is no longer in the work place and does not have an employer to come up to them and say, "Well, this is now a carcinogen so we are going to protect you or regulate your exposure it in such a way." There is no provision in the current hazard communication standard to notify that worker when a chemical, the identity of which has been withheld under the trade secret provision, has later been determined to be a carcinogen.

Mr. GAYDOS. Let me interrupt you right there. What do you suggest, that they follow that worker? He may have two or three places of employment. Are you suggesting that, whatever procedure we adopt, that they follow that worker from place to place?

Ms. HEZA. There has got to be some means of tracking. I'm not sure what that means would be, but I think there needs to be——

Mr. GAYDOS. What if he is running away from his wife and doesn't want to leave a trail?

Ms. HEZA. I can't answer that question, but yes, I do think that there should be some means of tracking workers.

Mr. GAYDOS. As a practical matter, though, it does pose some problems, doesn't it.

Ms. HEZA. Yes, it can.

Mr. GAYDOS. When a man leaves employment, many things happen. When he goes into retirement, he may retire in Mexico, and again, I say it in all sincerity, he may be fleeing from a marital problem at home. Many things occur. I am just wondering about the practicality of your observation, not that I disagree with it, I just wonder how you are going to do it.

Ms. HEZA. Well, the fact of the matter is that whether going from job to job or whether people retire, people can be traced through the Social Security and other available records, such as the IRS, so it is not as though it is impossible to find someone. I don't know what the answer would be and I realize that it does present a very big problem, but I think it is possible to track a person through available records.

Mr. GAYDOS. All right. I just wondered if you had some kind of a plan by design or some procedure that you had affirmatively suggested might be the practical way of putting into effect what you are advocating. All right.

I hope you don't mind me interrupting you because that thought crossed my mind immediately.

Ms. HEZA. No, that is OK.

Mr. GAYDOS. I am sorry, go ahead.

Ms. HEZA. Let me find my place here.

Mr. GAYDOS. We don't want to get you off track.

Ms. HEZA. The preamble to the access standard, 191020, states that workers have a fundamental need to know the identity of and the extent of exposure to toxic substances and any harmful physical agents and any resulting health effects, regardless of whether or not information is a trade secret.

In other words, employers must not be allowed to deny access to information needed to detect, treat and prevent occupational diseaes. It is also recognized that State commonlaw remedies for recovering damages from improper and unethical disclosure of trade secret information had existed since 1862 and that these were sufficient to deal with the needs of business protections.

I am referring to the liability clause in the Federal hazard communication standard now. At the very least, as many State right-to-know laws have attempted to do, a special category of hazardous substances, carcinogens, teratogens, and mutagens, should be created for which no trade secret claims must be made. That would be a possible solution.

Of course, if something is discovered 5 years down the line, it may be a problem tracking a previously exposed employee. The problem with the trade secret provision is that chemical identity can be withheld from an employee, and when we are dealing with something as serious as a carcinogen or something that is under investigation as a potential carcinogen, this information should be relayed to the worker and should not be withheld.

Last, I would like to talk about the lack of objective criteria for training workers to evaluate data. Without thorough education to understand the information transmitted, communication is not complete. I am sure you are familiar with the training requirements of the Federal hazard communication standard, so I will not repeat them.

Also, the training requirements are listed in the submitted testimony that you should have in front of you.

The fact is that the Federal hazard communication standard provides no guidance regarding curriculum or the amount of time that needs to be devoted to training. Much of the work we do for our local members is training them on the OSHA standards and we have found in discussion with them that generally the quality and quantity of health and safety training they receive leaves a lot—and I emphasize a lot—to be desired.

A good example would be the training our members have been given as required by OSHA standard 1910134, respirator protection. Some common exposures in the paper industry are chlorine and hydrogen sulfide and there is a standard that is supposed to require that employees be provided with respiratory protection for

PREPARED STATEMENT OF UNITED PAPERWORKERS INTERNATIONAL UNION, DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH

My name is Vicky Heza. I am an industrial hygienist with the UPIU Department of Health and Safety. I am testifying on behalf of my colleagues in that department, on behalf of Wayne E. Glenn, the President of UPIU, and on behalf of the 265,000 members of UPIU throughout the country.

There are 3 major points that I would like to make about the Federal Hazard Communication Standard today. These points all stem from our feeling that:

1. it fails to provide standard criteria for identifying hazards;
2. it fails to provide standard criteria for communicating these hazards;
3. it fails to achieve a proper balance between employers' needs to protect trade secret claims and society's need and responsibility to protect workers' health.

I would also like to suggest to the members of the subcommittee that, if they are truly concerned with communicating the hazards of Chemicals to the public, they must broaden their perspective beyond the problems of this one standard and look at the general policy needs for toxic regulation at this moment in our country.

Let's turn first to the issue of standardizing hazard evaluation. Evaluating hazards involves an understanding and balancing of many variables. The first of these is knowledge of the physical and chemical properties of

the substance; second, its toxicological properties in animal models or in humans; third, the sources, routes, duration and magnitude of the exposures, and, fourth, other variables - such as age, sex, reproductive capacity, and synergistic exposures - which could affect the absorption, metabolism or destruction of the substance in the body. The manufacturers responsibility ends at the second of these steps; no one is responsible for the third and fourth.

Even the first steps of hazard evaluation involve a truly complex process, which few agencies, unions, or companies have the resources and experience to do properly. Evaluation, furthermore, is severely limited by the paucity of data in the toxicology of commercial chemicals.

The National Research Council in a report entitled Toxicity Testing: Strategies to Determine Needs & Priorities estimated the percentage of 12,860 chemicals in commerce with production levels of at least 1 million pounds per year that met all of their criteria for adequate toxicity testing. The percentage was 0. The percentage that met criteria for "adequate" testing for:

acute oral toxicity was 50%

acute dermal toxicity was 50%

corrosivity was 100%

skin sensitization was 100%

That's the good news.

The bad news is that no testing had been done for the more relevant categories, i.e. the long-term testing of doses taken orally, dermally, or inhaled.

In the area of carcinogenicity, 100% of the testing reviewed was considered inadequate, as was 100% of the testing reviewed for genetic toxicity. (See Addendum 1: Tables 1 through 7 attached.) This is a severe

limitation that we need to understand at the outset and that needs to shape Congressional policy.

Given this context, however, we need to examine how best to communicate what we do understand about the hazards of chemicals to the working women and men in this country.

We do not believe the hazard communication standard (HCS) reflects a recognition of the complexity of the problem of real communication of real hazards. If you will remember, the Bingham OSHA envisioned a series of hazard evaluation standards:

- the first one to provide employees access to records documenting exposures to workplace chemicals and documenting health problems in the workplace that might be related to those chemical exposures;
- the second was to provide for the identification and labeling of hazardous substances in the workplace and, as we understand it;
- the third was planned to provide for education and training of workers in hazard evaluation and control.

The first of these became OSHA 1910.20 - access to Employee Medical and Exposure Records. This standard established some important principles that were the basis for the original hazard identification standard, prepared in 1981. These principles were that:

1. given the current state of our knowledge of toxicology, hazards should be defined broadly so that the benefit of the doubt would always be given to worker protection, and
2. that there should be no doubt permitted when trying to identify the cause of an individual's illness if exposures at the workplace were suspected.

Under 1910.20 toxic substance was defined as any chemical substance, biological substance, physical stress (noise, heat, vibration, radiation) which

is regulated by federal standards in the NIOSH Registry of Toxic Effects of Chemical Substances, or for which there is evidence of human health effects.

This is a much broader base (about 58,000 chemicals) than the current definition which starts with about 600 chemicals and adds in others which, in the judgment of manufacturers, are significant health hazards.

There is an interesting typographical error—at least we assumed it was an error—in the version of 1910.1200, the Hazard Communication Standard, Addendum 2, which we received through BNA. Read as written, it makes our point very well. See if you can catch this mistake:

> "Hazard evaluation is a process which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance-orientation of the hazard determination does diminish the duty of the chemical manufacturer, importer, or employer to conduct a thorough evaluation examining all relevant data and producing a scientifically defensible evaluation..." (see Addendum 2 - Appendix B).

Obviously, OSHA intended to say that the performance orientation will not interfere with the quality of information available to workers. However, we feel it will, because it has in the past.

Take for example the assessment of formaldehyde. Of six material safety data sheets we've reviewed at the request of our locals in 1984, only one mentioned the potential of formaldehyde to sensitize workers and none mentioned the 1981 data that formaldehyde is carcinogenic.

Admittedly, information on the carcinogenicity of formaldehyde will now be mandated to be reported by HCS because the National Toxicology Program has added it to their list of suspected human carcinogens—even though OSHA hasn't responded to that data. But what about the data on

sensitization? What if the company choses not to search Index Medicus? Or look up the references in RTECS? Because these are only recommended references, how will the adequacy of this hazard determination be verified? enforced? It can't be by OSHA because the performance orientation is so ambiguous.

Before leaving the issue of evaluation, we need to examine also the impact of the trade secret provisions of the HCS on hazard-evaluation.

You know that HCS leaves it up to the manufacturer or employer to decide what is or isn't a trade secret, but requires that, though the identity may be withheld, the health hazard information be communicated to the worker. Again without knowing the identity, how can the assessment be verified?

More importantly, what will a worker do five years from now when hopefully we've repeated some of the 100% inadequate carcinogenicity tests and learn of positive results on a substance that she has worked with for 20 years? This question raises two issues.

Is a family physician likely to sign confidentiality agreements that obligate him to pay millions of dollars in potential damages in order to find out if, in fact, that chemical was one of the contents of the substances his patient had been exposed to? Realistically, given the level of training in occupational medicine most U.S. physicians have had and the expense involved, this is very unlikely. It's even unlikely that, given the barriers created by potential financial liability most physicians would pursue information when faced with cases of lung disease or neurological disease or leukemia that could be related to work factors. Physicians are trained to treat, not identify, causes.

Also, there is no provision in the current standard that requires downstream notification that a substance an employee was previously exposed

to has been recently identified as a carcinogen, teratogen or mutagen.

We are missing an incredible opportunity to identify the true extent of occupational illness in the United States by accepting the underlying policy of HCS that profits are to be weighed more heavily than the public health. This in fact is not the policy that was put forward under the OSHA Administration in the past.

The preamble to the Access Standard 1910.20 states that "Workers (not just their doctors or representatives) have a fundamental need to know the identity of, and extent of exposure to, toxic substances and any harmful physical agents, and any resulting health effects, regardless of whether or not information is a trade secret."

In other words, employers must not be allowed to deny access to information needed to detect, treat, and prevent occupational disease. It was also recognized that state common law remedies for recurring damages from improper or unethical disclosure of trade secret information had existed since 1862, and that these were sufficient to deal with needs for business protections.

At the very least, as many state Right to Know laws have attempted to do, a special category of hazardous substances --carcinogens, teratogens, and mutagens--should be created for which no trade secret claims may be made.

And although we've not chosen to emphasize our commitment to community access to hazards information in this testimony today, we would like to say that workplace health problems become community health problems--family health problems--that can't be confined to the workplace and to industrial medical services. We need to look at these problems as such and try to involve the medical profession in a major public health effort to identify and control work-related illness, rather than create unnecessary liability barriers to their ability to provide care.

We'd like now to comment on our point that the Hazard Communication Standard also fails to provide objective criteria for training workers to evaluate data. Without thorough education to understand the information transmitted communication is not complete.

How does the standard address this? It is the employer's obligation to train workers on:

1. the requirements of HCS;
2. any operations where hazardous chemicals are present;
3. the location and availability of the written hazards communication program and MSDS's (material safety data sheets);
4. methods to detect the presence or release of a hazardous chemical;
5. physical and health hazard of each chemical in each work area;
6. measures that can be taken to protect workers from exposure;
7. labeling system, MSDS, and how to obtain and use this hazard information.

It gives no guidance regarding curriculum or the time that needs to be devoted to the training. We would expect, given our discussions with our members about the quality and quantity of health and safety training they have received in the past from their employers, that most employers will rent a prepackaged video presentation on MSDS's or HCS, and in a one-hour session replay the video, pass out copies of the summary of the standard and copies of the workplace chemical list, explain where MSDS's will be kept, and answer a few procedural questions since most employers will be unable to answer technical questions.

Please refer to Addendum 3, a material safety data sheet on Ektasolve EE Solvent, an ethylene glycol monoethyl ether prepared by Eastman Chemical Products, Inc. We offer this as an example of a thorough and comprehensive MSDS, but one that requires more than an hour of training to evaluate.

I'm sure as you look at it, even with your advanced education and experience, you have questions about whether Ektasolve is safe to work with if your job is to operate a machine that sprays it on paper and to cut, stack and handle that paper all day; you would be especially concerned if you were planning a family in the near future.

Look at Sections C and D for example on Page 3. Section C claims that, "Studies in experimental animals have produced damage to sperm-producing cells of the testicle when males were exposed, and birth defects when pregnant females were exposed."

Section D details two pages of toxicity data, including teratogenicity studies. Section D might raise some of the following questions in your minds:

- What is an LD50 and what does it measure?
- If 3527 mg/kg is slightly toxic, what is highly toxic?
- Does slight skin irritation indicate sensitization is possible?
- If a substance is teratogenic, could it be carcinogenic? mutagenic?
- What is the significance of decreased hemoglobin concentration, hematocrit and total red blood cell count? Of cortical atrophy of the kidney?
- How often have animal teratogens been shown to be human teratogens also?

These are legitimate questions that need to be answered for an individual to be able to interpret this MSDS.

We estimate it would take us a minimum of 20 hours to provide the basic chemistry and health science needed to interpret most material safety data sheets with confidence and understanding.

Our International is committed to providing such training to supplement the one-shot session most paper workers will get as training. I'm sure that union health and safety staff members across the country will also be

concentrating their efforts to guarantee their members can make the most effective use of this standard. But where are the resources for unorganized workers—especially since the current OSHA administration has chosen to cut all New Directions Worker Education funding?

In summary, we've tried to highlight the weaknesses in the criteria for hazard evaluation, communication, and access to trade secrets which we see in the HCS. We haven't even touched on the limits of coverage and the inadequacies of labelling criteria which are other major weaknesses in the "standard."

We've also tried to point out significant problems in our government's general approach to toxics. These problems must be dealt with soon. Until they are, hazard communication is really an empty effort. These problems are:

1. that chemicals are innocent till proven guilty, and no one in Washington wants to prosecute the charges against them! Not EPA, not OSHA. Chemicals will continue to be tried in the workplace with American workers as the victims.
2. that the resources are not going where they should—to pretest chemicals, to provide funds for workers' training independent of their employers; to encourage more investigation of occupational health problems through NIOSH, the National Cancer Institute and other research agencies.
3. that federal administrative efforts to squash state initiatives to provide stronger Right to Know laws fly in the face of past policy and the needs of working people for health protection!

ADDENDUM 1

Toxicity Testing

Strategies to Determine Needs and Priorities

Steering Committee on Identification of Toxic and Potentially Toxic Chemicals for Consideration by the National Toxicology Program

Board on Toxicology and Environmental Health Hazards

Commission on Life Sciences

National Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1984

TABLE 12 Quality of Testing of 1,250 Pesticides and Inert Ingredients of Pesticide Formulations in Select Universe

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IR	IE	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	0-0-10	2-13-36	10-27-51	36-60-81	0-0-10	0-0-10
2. Acute oral toxicity--nonrodent		6-20-44	0-0-34	0-0-34	32-58-82	0-0-34	3-17-44
3. Acute dermal toxicity	*	6-20-44	0-0-22	3-17-44	56-83-97	0-0-22	0-0-22
4. Acute parenteral toxicity		10-27-51	0-9-26	0-0-36	44-73-92	0-0-26	0-9-36
5. Acute inhalation toxicity	*	14-33-58	1-10-39	9-10-61	15-40-70	1-10-39	1-10-39
6. Acute dermal irritation-corrosivity		15-40-64	1-11-43	17-44-75	17-44-75	0-0-28	0-0-28
7. Acute eye irritation-corrosivity	*	14-33-58	22-50-78	0-0-26	15-40-70	1-10-39	0-0-26
8. Skin sensitization--guinea pig	*	30-53-76	5-29-66	1-14-52	23-57-87	9-5-35	0-0-35
9. Subchronic oral toxicity--rodent: 14- or 28-d study		6-20-44	0-0-22	0-0-34	56-83-97	0-0-22	0-0-34
10. Subchronic toxicity--nonrodent: 14- or 28-d study		14-33-58	0-0-26	0-0-26	74-100-100	0-0-26	0-0-26
11. Subchronic oral toxicity--rodent: 90-d study	*	10-27-51	0-0-24	20-45-73	16-36-65	0-0-24	3-10-47
12. Subchronic oral toxicity--nonrodent: 90-d study	*	10-27-51	0-0-24	0-27-56	35-64-86	0-9-.6	0-0-24
13. Subchronic oral toxicity--nonrodent: 6- to 12-mo study		46-73-96	0-0-53	0-0-53	47-100-100	0-0-53	0-0-53
14. Subchronic dermal toxicity: 21- or 28-d study	*	30-53-76	0-0-35	0-0-35	40-66-59	1-14-52	0-0-35
15. Subchronic dermal toxicity: 90-d study		69-73-96	0-0-53	0-0-53	47-100-100	0-0-53	0-0-53
16. Subchronic inhalation toxicity: 14- or 28-d stuny	*	36-60-81	0-0-39	1-17-50	27-67-94	0-0-39	1-17-50
17. Subchronic inhalation toxicity 90-d study		24-47-70	0-0-31	0-0-31	19-50-81	0-0-31	19-50-81
18. Neurobehavioral toxicity	*	42-67-86	0-0-45	0-0-45	36-60-99	0-0-45	1-20-66
19. Teratology study--rodent, rabbit	*	24-47-70	0-0-31	1-13-47	11-30-71	19-50-81	0-0-31
20. Multigeneration reproduction study--rodent	*	24-47-70	0-0-31	1-13-47	19-50-81	5-25-60	1-13-47
21. Toxicokinetics	*	6-20-44	3-17-44	7-25-53	3-17-44	3-17-44	7-25-53
22. Carcinogenicity--rodent	*	30-53-76	0-0-35	5-29-66	13-43-77	5-29-66	0-0-35
23. Chronic toxicity	*	10-27-51	3-18-47	0-0-36	16-36-65	3-18-47	3-18-47
24. Combined chronic toxicity-carcinogenicity-rodent	*	36-60-81	0-0-39	0-0-39	42-83-99	0-0-39	1-17-50
25. Genetic toxicity	*	6-20-44	0-0-22	0-0-34	7-25-53	39-67-00	0-0-22
26. Subchronic eye toxicity		69-73-90	0-0-53	0-0-53	47-100-100	0-0-53	0-0-53
27. Segment I: fertility and reproductive performance		36-60-81	0-0-39	0-0-39	27-67-94	1-17-50	1-17-50
28. Segment III: perinatal and postnatal performance		42-67-86	1-20-66	0-0-45	19-60-92	0-0-45	1-20-66
29. Acute delayed neurotoxicity	*	36-60-81	0-0-39	0-0-39	42-83-99	0-0-39	1-17-50
30. Skin painting--chronic		30-53-76	0-0-35	0-0-35	36-71-95	1-14-52	1-14-52
31. Implantation studies		69-73-90	0-0-53	0-0-53	47-[illegible]-100	0-0-53	0-0-53
32. Human sensitization studies		42-67-86	0-0-45	1-20-66	36-80-xx	0-0-45	2-0-45
33. Skin penetration studies		69-73-90	0-0-53	0-0-53	47-100-100	0-0-53	0-0-53

a According to the standards adopted by the Committee on Toxicity Data Elements.

b X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IR = test conducted inadequately, but retesting is not needed;
IE = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.
Percentages are presented with upper and lower 90% confidence intervals.
Value for each test type under X is a proportion of all substances in this category of the subsample.
Values in all other columns are based only on portion of category for which test was conducted.

TABLE 13 Quality of Testing of 3,410 Cosmetic Ingredients in Select Universe

Test Type	Test Required[a]	Quality Rating[b]					
		X	G	A	IB	IB	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent		16-33-58	4-20-51	1-10-39	20-60-85	1-10-39	0-0-26
2. Acute oral toxicity--nonrodent		56-80-94	0-0--63	0-0-63	14-67-90	2-33-86	0-0-63
3. Acute dermal toxicity	*	42-67-86	0-0-45	1-20-66	34-80-99	5-0-45	0-0-45
4. Acute parenteral toxicity		19-40-64	0-0-20	10-33-66	4-22-55	10-33-66	1-11-43
5. Acute inhalation toxicity		69-73-90	0-0-53	1-25-75	10-50-90	1-25-75	0-0-53
6. Acute dermal irritation-corrosivity	*	42-67-66	1-20-66	1-20-66	19-60-92	0-0-45	0-0-45
7. Acute eye irritation-corrosivity	*	69-73-90	1-25-75	10-50-90	1-25-75	0-0-53	0-0-53
8. Skin sensitization--guinea pig	*	56-80-94	2-33-86	2-33-86	0-0-63	0-0-63	2-33-86
9. Subchronic oral toxicity--rodent: 14- or 28-d study		19-40-64	0-0-20	1-11-43	34-67-90	4-22-55	0-0-20
10. Subchronic toxicity--nonrodent: 14- or 28-d study		56-80-34	0-0-63	0-0-63	2-33-86	2-33-86	2-33-86
11. Subchronic oral toxicity--rodent: 90-d study		69-73-90	0-0-53	0-0-53	25-75-99	0-0-53	1-25-75
12. Subchronic oral toxicity--nonrodent: 90-d study		66-87-98	0-0-78	0-0-78	0-0-78	22-100-100	0-0-78
13. Subchronic oral toxicity--nonrodent: 6- to 12-mo study		72-93-100	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
14. Subchronic dermal toxicity: 21- or 28-d study	*	66-87-98	0-0-78	0-0-78	22-100-100	0-0-78	0-0-78
15. Subchronic dermal toxicity: 90-d study	*	72-93-100	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
16. Subchronic inhalation toxicity: 14- or 28-d study		82-100-100					
17. Subchronic inhalation toxicity 90-d study		82-100-100					
18. Neurobehavioral toxicity	*	82-100-100					
19. Teratology study--rodent, rabbit		56-80-94	0-0-63	0-0-63	2-33-86	14-67-90	0-0-63
20. Multigeneration reproduction study--rodent		66-87-98	0-0-78	3-50-97	3-50-97	3-50-97	0-0-78
21. Toxicokinetics		69-73-90	0-0-53	1-25-75	1-25-75	10-50-90	0-0-53
22. Carcinogenicity--rodent	*	36-60-81	0-0-39	6-33-73	6-33-73	1-17-50	1-17-50
23. Chronic toxicity		42-67-86	0-0-45	1-20-66	1-20-66	19-60-92	0-0-45
24. Combined chronic toxicity-carcinogenicity-rodent		72-93-100	5-100-100	0-0-95	0-0-95	0-0-95	0-0-95
25. Genetic toxicity	*	26-47-70	0-0-31	1-13-47	1-13-47	40-75-95	0-0-31
26. Subchronic eye toxicity	*	82-100-100					
27. Segment I: fertility and reproductive performance		66-87-98	0-0-78	0-0-78	3-50-97	3-50-97	0-0-78
28. Segment III: perinatal and postnatal performance		82-100-100					
29. Acute delayed neurotoxicity		82-100-100					
30. Skin painting--chronic	*	72-93-100	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
31. Implantation studies		82-100-100					
32. Human sensitization studies	*	42-67-86	0-0-45	19-60-92	0-0-45	8-40-81	0-0-45
33. Skin penetration studies	*	72-93-100	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95

[a] According to the standards adopted by the Committee on Toxicity Data Elements.

[b] X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IB = test conducted inadequately, but retesting is not needed;
IB = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.

Percentages are presented with upper and lower 90% confidence intervals.

Value for each test type under X is a proportion of all substances in this intended-use category of the subsample without regard for whether the test was conducted. Each value under X represents the proportion of all substances in the category not having test done. Values in all other columns are based only on portion of category for which test was conducted.

TABLE 14 Quality of Testing of 1,815 Drugs and Excipients in Drug Formulations in Select Universe

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IN	IR	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	6-20-44	0-0-34	3-17-44	25-50-75	0-0-22	7-25-53
2. Acute oral toxicity--nonrodent	*	10-27-51	0-0-24	0-9-36	35-64-86	0-9-36	3-18-47
3. Acute dermal toxicity	*	30-53-76	0-0-35	0-0-35	65-100-100	0-0-35	0-0-35
4. Acute parenteral toxicity	*	2-13-36	0-0-32	3-15-41	22-46-71	0-0-32	7-23-49
5. Acute inhalation toxicity	*	30-53-76	0-0-35	0-0-35	48-86-99	0-0-35	1-14-52
6. Acute dermal irritation-corrosivity	*	24-47-70	0-0-31	5-25-60	40-75-95	0-0-31	0-0-31
7. Acute eye irritation-corrosivity	*	24-47-70	1-13-47	1-13-47	40-75-95	0-0-31	0-0-31
8. Skin sensitization--guinea pig	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
9. Subchronic oral toxicity--rodent: 14- or 28-d study	*	14-33-58	0-0-26	0-0-26	61-90-00	0-0-26	1-10-39
10. Subchronic toxicity--nonrodent: 14- or 28-d study	*	24-47-70	0-0-31	0-0-31	53-88-99	0-0-31	1-13-47
11. Subchronic oral toxicity--rodent: 90-d study	*	14-33-58	0-0-26	4-20-51	30-60-85	0-0-26	4-20-51
12. Subchronic oral toxicity--nonrodent: 90-d study	*	14-33-58	0-0-26	4-20-51	22-50-78	4-20-51	1-10-39
13. Subchronic oral toxicity--nonrodent: 6- to 12-mo study	*	24-47-70	1-13-47	1-13-47	29-63-47	1-13-47	0-0-31
14. Subchronic dermal toxicity: 21- or 28-d study	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
15. Subchronic dermal toxicity: 90-d study	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
16. Subchronic inhalation toxicity: 28- or 14-d study	*	30-53-76	0-0-35	0-0-35	48-86-99	0-0-35	1-14-52
17. Subchronic inhalation toxicity 90-d study	*	30-53-76	0-0-35	0-0-35	48-86-99	0-0-35	1-14-52
18. Neurobehavioral toxicity	*	24-47-70	0-0-31	1-13-47	40-75-95	0-0-31	1-13-47
19. Teratology study--rodent, rabbit	*	10-27-51	0-0-24	0-0-24	35-64-86	3-18-47	3-18-47
20. Multigeneration reproduction study--rodent	*	24-47-70	0-0-31	0-0-31	40-75-95	1-13-47	1-13-47
21. Toxicokinetics	*	10-27-51	0-0-24	0-27-56	27-55-80	3-18-47	0-0-24
22. Carcinogenicity--rodent	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
23. Chronic toxicity	*	10-27-51	0-9-36	0-9-36	20-45-73	0-9-36	0-27-56
24. Combined chronic toxicity-carcinogenicity-rodent	*	30-53-76	0-0-35	1-14-52	48-86-99	0-0-35	0-0-35
25. Genetic toxicity	*	14-33-58	0-0-26	0-0-26	30-60-85	15-40-70	0-0-26
26. Subchronic eye toxicity	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
27. Segment I: fertility and reproductive performance	*	24-47-70	0-0-31	0-0-31	40-75-95	0-0-31	5-25-60
28. Segment III: perinatal and postnatal performance	*	14-33-58	0-0-26	1-10-39	30-60-85	1-10-39	4-20-51
29. Acute delayed neurotoxicity	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
30. Skin painting--chronic	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
31. Implantation studies	*	36-60-81	0-0-39	0-0-39	61-100-100	0-0-39	0-0-39
32. Human sensitization studies	*	24-47-70	5-25-60	0-0-31	40-75-95	0-0-31	0-0-31
33. Skin penetration studies		30-53-76	1-14-52	0-0-35	48-86-99	0-0-35	0-0-35

[a] According to the standards adopted by the Committee on Toxicity Data Elements.

[b] X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IN = test conducted inadequately, but retesting is not needed;
IR = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.
Percentages are presented with upper and lower 90% confidence intervals.
Value for each test type under X is a proportion of all substances in this category of the subsample. Values in all other columns are based only on portion of category for which test was conducted.

TABLE 15 Quality of Testing of 8,627 Food Additives in Select Universe

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IN	IR	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	14-33-58	4-20-51	4-20-51	22-50-78	0-0-26	1-10-39
2. Acute oral toxicity--nonrodent	*	49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
3. Acute dermal toxicity		30-53-76	1-14-52	5-29-66	13-43-77	0-0-35	1-14-52
4. Acute parenteral toxicity		10-27-51	0-0-24	0-0-24	35-64-86	0-9-36	9-27-56
5. Acute inhalation toxicity		36-60-81	0-0-39	1-17-58	42-83-99	0-0-39	0-0-39
6. Acute dermal irritation-corrosivity		24-47-70	0-0-31	5-25-60	29-63-89	0-0-31	1-13-47
7. Acute eye irritation-corrosivity		19-40-64	1-11-43	1-11-43	34-67-90	0-0-28	1-11-43
8. Skin sensitization--guinea pig		49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
9. Subchronic oral toxicity--rodent: 14- or 28-d study	*	10-27-51	0-0-24	0-0-24	20-45-73	27-55-80	0-0-24
10. Subchronic toxicity--nonrodent: 14- or 28-d study		49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
11. Subchronic oral toxicity--rodent: 90-d study	*	36-60-81	0-0-39	1-17-58	15-50-85	6-33-73	0-0-39
12. Subchronic oral toxicity--nonrodent:90-d study	*	49-73-90	0-0-53	0-0-53	25-75-99	0-0-53	1-25-75
13. Subchronic oral toxicity--nonrodent:6- to 12-mo study	*	56-80-94	0-0-63	0-0-63	37-100-100	0-0-63	0-0-63
14. Subchronic dermal toxicity: 21- or 28-d study		42-67-86	0-0-45	0-0-45	19-60-92	0-0-45	8-40-81
15. Subchronic dermal toxicity: 90-d study		49-73-90	0-0-53	0-0-53	25-75-99	0-0-53	1-25-75
16. Subchronic inhalation toxicity: 14- or 28-d study		42-67-86	0-0-45	0-0-45	34-80-99	0-0-45	1-20-66
17. Subchronic inhalation toxicity 90-d study		36-60-81	0-0-39	1-17-58	15-50-85	1-17-58	1-17-58
18. Neurobehavioral toxicity	*	49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
19. Teratology study--rodent, rabbit	*	30-53-76	0-0-35	1-14-52	13-43-77	13-43-77	0-0-35
20. Multigeneration reproduction study--rodent	*	49-73-90	0-0-53	0-0-53	25-75-99	0-0-53	1-25-75
21. Toxicokinetics	*	30-53-76	0-0-35	1-14-52	23-57-87	5-29-66	0-0-35
22. Carcinogenicity--rodent	*	19-40-64	0-0-28	0-0-28	17-44-75	17-44-75	1-11-43
23. Chronic toxicity	*	36-60-81	0-0-39	0-0-39	15-50-85	15-50-85	0-0-39
24. Combined chronic toxicity-carcinogenicity-rodent	*	42-67-86	0-0-45	0-0-45	19-60-92	0-0-45	8-40-81
25. Genetic toxicity	*	6-20-44	0-0-22	0-0-22	7-25-53	47-75-93	0-0-22
26. Subchronic eye toxicity		42-67-86	0-0-45	0-0-45	19-60-92	1-20-66	1-20-66
27. Segment I: fertility and reproductive performance		49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
28. Segment III: perinatal and postnatal performance		56-80-94	0-0-63	0-0-63	37-100-100	0-0-63	0-0-63
29. Acute delayed neurotoxicity		42-67-86	0-0-45	1-20-66	19-60-93	0-0-45	1-20-66
30. Skin painting--chronic		56-80-94	0-0-63	0-0-63	37-100-100	0-0-63	0-0-63
31. Implantation studies		42-67-86	1-20-66	0-0-45	34-80-99	0-0-45	0-0-45
32. Human sensitization studies		49-73-90	0-0-53	0-0-53	25-75-99	1-25-75	0-0-53
33. Skin penetration studies							

a According to the standards adopted by the Committee on Toxicity Data Elements.

b X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IN = test conducted inadequately, but retesting is not needed;
IR = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.
Percentages are presented with upper and lower 90% confidence intervals.
Value for each test type under X is a proportion of all substances in this category of the subsample. Values in all other columns are based only on portion of category for which test was conducted.

TABLE 16 Quality of Testing of 12,860 Chemicals in Commerce in Select Universe with Production Levels of at Least 1 Million lb/yr

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IN	IR	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	30-60-85	1-25-75	1-25-75	10-50-90	0-0-57	0-0-53
2. Acute oral toxicity--nonrodent		74-100-100					
3. Acute dermal toxicity	*	49-80-96	0-0-78	3-50-97	0-0-78	3-50-97	0-0-78
4. Acute parenteral toxicity		4-20-51	0-0-31	0-0-31	5-25-60	29-63-89	1-13-47
5. Acute inhalation toxicity	*	74-100-100					
6. Acute dermal irritation-corrosivity	*	30-60-85	0-0-53	25-75-95	0-0-53	1-25-75	0-0-53
7. Acute eye irritation-corrosivity	*	49-80-96	22-100-100	0-0-78	0-0-78	0-0-78	0-0-78
8. Skin sensitization--guinea pig	*	61-90-99	5-100-100	0-0-95	0-0-95	0-0-95	0-0-95
9. Subchronic oral toxicity--rodent: 14- or 28-d study	*	61-90-99	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
10. Subchronic toxicity--nonrodent: 14- or 28-d study		74-100-100					
11. Subchronic oral toxicity--rodent: 90-d study	*	74-100-100					
12. Subchronic oral toxicity--nonrodent: 90-d study	*	74-100-100					
13. Subchronic oral toxicity--nonrodent: 6- to 12-mo study		74-100-100					
14. Subchronic dermal toxicity: 21- or 28-d study	*	61-90-99	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
15. Subchronic dermal toxicity: 90-d study		74-100-100					
16. Subchronic inhalation toxicity: 14- or 28-d study		61-90-99	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
17. Subchronic inhalation toxicity 90-d study		74-100-100					
18. Neurobehavioral toxicity	*	74-100-100					
19. Teratology study--rodent, rabbit	*	74-100-100					
20. Multigeneration reproduction study--rodent		74-100-100					
21. Toxicokinetics	*	39-70-91	0-0-63	2-13-86	0-0-63	14-67-98	0-0-63
22. Carcinogenicity--rodent	*	61-90-99	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
23. Chronic toxicity	*	74-100-100					
24. Combined chronic toxicity-carcinogenicity-rodent		74-100-100					
25. Genetic toxicity[c]	*	49-80-96	0-0-78	0-0-78	3-50-97	3-50-97	0-0-78
26. Subchronic eye toxicity		74-100-100					
27. Segment I: fertility and reproductive performance		74-100-100					
28. Segment II: perinatal and postnatal performance		74-100-100					
29. Acute delayed neurotoxicity		74-100-100					
30. Skin painting--chronic		61-90-99	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
31. Implantation studies		74-100-100					
32. Human sensitization studies		74-100-100					
33. Skin penetration studies		74-100-100					

[a] According to the standards adopted by the Committee on Toxicity Data Elements.

[b] X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IN = test conducted inadequately, but retesting is not needed;
IR = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.
Percentages are presented with upper and lower 90% confidence intervals.
Value for each test type under X is a proportion of all substances in this category of the subsample.
Values in all other columns are based only on portion of category for which test was conducted.

TABLE 17 Quality of Testing of 13,911 Chemicals in Commerce in Select Universe with Production Levels Less Than 1 Million lb/yr

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IN	IR	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	22-50-78	1-20-66	8-40-81	1-20-66	1-20-66	0-0-45
2. Acute oral toxicity--nonrodent		61-90-99	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
3. Acute dermal toxicity	*	39-70-91	0-0-63	0-0-63	37-100-100		
4. Acute parenteral toxicity		22-50-78	0-0-45	1-20-66	0-0-45	34-80-99	0-0-45
5. Acute inhalation toxicity	*	49-80-96	3-50-97	0-0-78	3-50-97	0-0-78	0-0-78
6. Acute dermal irritation-corrosivity	*	30-60-85	0-0-53	1-25-75	10-50-90	0-0-53	1-25-75
7. Acute eye irritation-corrosivity	*	49-80-96	0-0-78	0-0-78	3-50-97	0-0-78	3-50-97
8. Skin sensitization--guinea pig	*	61-90-99	0-0-95	0-0-95	0-0-95	0-0-95	5-100-100
9. Subchronic oral toxicity--rodent: 14- or 28-d study	*	49-80-96	0-0-78	3-50-97	3-50-97	0-0-78	0-0-78
10. Subchronic toxicity--nonrodent: 14- or 28-d study		74-100-100					
11. Subchronic oral toxicity--rodent: 90-d study	*	49-80-96	0-0-78	22-100-100	0-0-78	0-0-78	0-0-78
12. Subchronic oral toxicity--nonrodent: 90-d study	*	74-100-100					
13. Subchronic oral toxicity--nonrodent:6- to 12-mo study		74-100-100					
14. Subchronic dermal toxicity: 21- or 28-d study	*	61-90-99	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
15. Subchronic dermal toxicity: 90-d study		74-100-100					
16. Subchronic inhalation toxicity: 28- or 14-d study		61-90-99	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
17. Subchronic inhalation toxicity 90-d study		49-80-96	3-50-97	0-0-78	0-0-78	0-0-78	3-50-97
18. Neurobehavioral toxicity	*	61-90-99	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
19. Teratology study--rodent, rabbit	*	61-90-99	5-100-100	0-0-95	0-0-95	0-0-95	0-0-95
20. Multigeneration reproduction study--rodent	*	74-100-100					
21. Toxicokinetics	*	61-90-99	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
22. Carcinogenicity--rodent	*	61-90-99	0-0-95	0-0-95	0-0-95	0-0-95	5-100-100
23. Chronic toxicity	*	61-90-99	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
24. Combined chronic toxicity-carcinogenicity-rodent	*	74-100-100					
25. Genetic toxicity		39-70-91	0-0-63	0-0-63	0-0-63	37-100-100	0-0-63
26. Subchronic eye toxicity		74-100-100					
27. Segment I: fertility and reproductive performance		74-100-100					
28. Segment III: perinatal and postnatal performance		61-90-99	0-0-95	0-0-95	0-0-95	0-0-95	5-100-100
29. Acute delayed neurotoxicity		74-100-100					
30. Skin painting--chronic		61-90-99	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
31. Implantation studies		74-100-100					
32. Human sensitization studies		61-90-99	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
33. Skin penetration studies		74-100-100					

[a] According to the standards adopted by the Committee on Toxicity Data Elements.

[b] X = test not done;
G = test conducted according to reference protocol guidelines;
A = test conducted adequately, but not according to reference protocol guidelines;
IN = test conducted inadequately, but retesting is not needed;
IR = test conducted inadequately, and retesting is needed;
C = test adequacy cannot be evaluated.
Percentages are presented with upper and lower 90% confidence intervals.
Value for each test type under X is a proportion of all substances in this category of the subsample.
Values in all other columns are based only on portion of category for which test was conducted.

TABLE 18 Quality of Testing of 21,752 Chemicals in Commerce in Select Universe with Unknown or Inaccessible Production Levels

Test Type	Test Required[a]	Quality Ratings[b]					
		X	G	A	IN	IR	C
		Estimated Percent of Select Universe with Indicated Quality					
1. Acute oral toxicity--rodent	*	26-45-65	0-0-24	8-27-56	28-45-73	0-0-24	8-27-56
2. Acute oral toxicity--nonrodent		78-95-100	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
3. Acute dermal toxicity	*	54-75-90	0-0-45	1-20-66	8-40-81	1-20-66	1-20-66
4. Acute parenteral toxicity		39-60-78	0-0-31	0-0-31	5-25-60	5-25-60	19-50-81
5. Acute inhalation toxicity	*	54-75-90	0-0-45	1-20-66	8-40-81	1-20-66	1-20-66
6. Acute dermal irritation-corrosivity	*	30-50-70	9-30-61	1-10-39	9-30-61	1-10-39	4-20-51
7. Acute eye irritation-corrosivity	*	39-60-78	1-13-47	1-13-47	11-38-71	1-13-47	5-25-60
8. Skin sensitization--guinea pig	*	60-80-93	0-0-53	0-0-53	0-0-53	10-50-90	10-50-90
9. Subchronic oral toxicity--rodent: 14- or 28-d study	*	49-70-86	0-0-39	0-0-39	15-50-85	6-33-73	1-17-58
10. Subchronic toxicity--nonrodent: 14- or 28-d study		72-90-98	0-0-78	3-50-97	3-50-97	0-0-78	0-0-78
11. Subchronic oral toxicity--rodent: 90-d study	*	66-85-96	0-0-63	2-33-86	0-0-63	2-33-86	2-33-86
12. Subchronic oral toxicity--nonrodent: 90-d study	*	78-95-100	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
13. Subchronic oral toxicity--nonrodent: 6- to 12-mo study		78-95-100	0-0-95	0-0-95	5-100-100	0-0-95	0-0-95
14. Subchronic dermal toxicity: 21- or 28-d study	*	72-90-98	0-0-78	0-0-78	0-0-78	0-0-78	22-100-100
15. Subchronic dermal toxicity: 90-d study		86-100-100					
16. Subchronic inhalation toxicity: 14- or 28-d study		72-90-98	0-0-78	0-0-78	0-0-78	22-100-100	0-0-78
17. Subchronic inhalation toxicity 90-d study		86-100-100					
18. Neurobehavioral toxicity:	*	86-100-100					
19. Teratology study--rodent, rabbit	*	72-90-98	3-50-97	0-0-78	0-0-78	3-50-97	0-0-78
20. Multigeneration reproduction study--rodent	*	72-90-98	0-0-78	3-50-97	0-0-78	3-50-97	0-0-78
21. Toxicokinetics	*	54-75-90	0-0-45	1-20-66	0-0-45	34-80-99	0-0-45
22. Carcinogenicity--rodent	*	66-85-96	0-0-63	14-67-98	0-0-63	2-33-86	0-0-63
23. Chronic toxicity	*	60-80-93	0-0-53	1-25-75	0-0-53	10-50-90	1-25-75
24. Combined chronic toxicity-carcinogenicity-rodent		86-100-100					
25. Genetic toxicity	*	35-55-74	0-0-28	0-0-28	0-0-28	72-100-100	0-0-28
26. Subchronic eye toxicity		86-100-100					
27. Segment II: fertility and reproductive performance		78-95-100	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95
28. Segment III: perinatal and postnatal performance		86-100-100					
29. Acute delayed neurotoxicity		86-100-100					
30. Skin painting--chronic		72-90-98	0-0-78	0-0-78	0-0-78	22-100-100	0-0-78
31. Implantation studies		78-95-100	0-0-95	0-0-95	0-0-95	5-100-100	0-0-95
32. Human sensitization studies		60-80-93	10-50-90	0-0-53	0-0-53	0-0-53	10-50-90
33. Skin penetration studies		78-95-100	0-0-95	5-100-100	0-0-95	0-0-95	0-0-95

[a] According to the standards adopted by the Committee on Toxicity Data Elements.

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A = test conducted adequately, but not according to reference protocol guidelines;
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Value for each test type under X is a proportion of all substances in this category of the subsample.
Values in all other columns are based only on portion of category for which test was conducted.

analyzing worker exposure to the chemical; and,

(D) Methods of diagnosing and treating harmful exposures to the chemical;

(iv) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(v) The health professional, and the employer or contractor of the health professional's services (i.e., downstream employer, labor organization, or individual employer), agree in a written confidentiality agreement that the health professional will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (i)(6) of this section, except as authorized by the terms of the agreement or by the chemical manufacturer, importer, or employer.

(4) The confidentiality agreement authorized by paragraph (i)(3)(iv) of this section:

(i) May restrict the use of the information to the health purposes indicated in the written statement of need;

(ii) May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

(iii) May not include requirements for the posting of a penalty bond.

(5) Nothing in this standard is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(6) If the health professional receiving the trade secret information decides that there is a need to disclose it to OSHA, the chemical manufacturer, importer, or employer who provided the information shall be informed by the health professional prior to, or at the same time as, such disclosure.

(7) If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity, the denial must:

(i) Be provided to the health professional within thirty days of the request;

(ii) Be in writing;

(iii) Include evidence to support the claim that the specific chemical identity is a trade secret;

(iv) State the specific reasons why the request is being denied; and,

(v) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

(8) The health professional whose request for information is denied under paragraph (i)(3) of this section may refer the request and the written denial of the request to OSHA for consideration.

(9) When a health professional refers the denial to OSHA under paragraph (i)(8) of this section, OSHA shall consider the evidence to determine if:

(i) The chemical manufacturer, importer, or employer has supported the claim that the specific chemical identity is a trade secret;

(ii) The health professional has supported the claim that there is a medical or occupational health need for the information; and,

(iii) The health professional has demonstrated adequate means to protect the confidentiality.

(10) (i) If OSHA determines that the specific chemical identity requested under paragraph (i)(3) of this section is not a *bona fide* trade secret, or that it is a trade secret but the requesting health professional has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means to protect the confidentiality of the information, the chemical manufacturer, importer, or employer will be subject to citation by OSHA.

(ii) If a chemical manufacturer, importer, or employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health services are provided without an undue risk of harm to the chemical manufacturer, importer, or employer.

(11) If, following the issuance of a citation and any protective orders, the chemical manufacturer, importer, or employer continues to withhold the information, the matter is referrable to the Occupational Safety and Health Review Commission for enforcement of the citation. In accordance with Commission rules, the Administrative Law Judge may review the citation and supporting documentation *in camera* or issue appropriate protective orders.

(12) Notwithstanding the existence of a trade secret claim, a chemical manufacturer, importer, or employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the chemical manufacturer, importer, or employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be implemented.

(13) Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is trade secret.

(j) *Effective dates.* Employers shall be in compliance with this section within the following time periods:

(1) Chemical manufacturers and importers shall label containers of hazardous chemicals leaving their workplaces, and provide material safety data sheets with initial shipments by November 25, 1985.

(2) Distributors shall be in compliance with all provisions of this section applicable to them by November 25, 1985.

(3) Employers shall be in compliance with all provisions of this section by May 25, 1986, including initial training for all current employees.

Appendix A to § 1910.1200—Health Hazard Definitions (Mandatory)

Although safety hazards related to the physical characteristics of a chemical can be objectively defined in terms of testing requirements (e.g. flammability),

[Appendix A to Sec. 1910.1200]

health hazard definitions are less precise and more subjective. Health hazards may cause measurable changes in the body—such as decreased pulmonary function. These changes are generally indicated by the occurrence of signs and symptoms in the exposed employees—such as shortness of breath, a non-measurable, subjective feeling. Employees exposed to such hazards must be apprised of both the change in body function and the signs and symptoms that may occur to signal that change.

The determination of occupational health hazards is complicated by the fact that many of the effects or signs and symptoms occur commonly in non-occupationally exposed populations, so that effects of exposure are difficult to separate from normally occurring illnesses. Occasionally, a substance causes an effect that is rarely seen in the population at large, such as angiosarcomas caused by vinyl chloride exposure, thus making it easier to ascertain that the occupational exposure was the primary causative factor. More often, however, the effects are common, such as lung cancer. The situation is further complicated by the fact that most chemicals have not been adequately tested to determine their health hazard potential, and data do not exist to substantiate these effects.

There have been many attempts to categorize effects and to define them in various ways. Generally, the terms "acute" and "chronic" are used to delineate between effects on the basis of severity or duration. "Acute" effects usually occur rapidly as a result of short-term exposures, and are of short duration. "Chronic" effects generally occur as a result of long-term exposure, and are of long duration.

The acute effects referred to most frequently are those defined by the American National Standards Institute (ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (Z129.1–1982)—irritation, corrosivity, sensitization and lethal dose. Although these are important health effects, they do not adequately cover the considerable range of acute effects which may occur as a result of occupational exposure, such as, for example, narcosis.

Similarly, the term chronic effect is often used to cover only carcinogenicity, teratogenicity, and mutagenicity. These effects are obvious a concern in the workplace, but again, do not adequately cover the area of chronic effects, excluding, for example, blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. This does not negate the need for employees to be informed of such effects and protected from them.

Appendix B, which is also mandatory, outlines the principles and procedures of hazard assessment.

For purposes of this section, any chemicals which meet any of the following definitions, as determined by the criteria set forth in Appendix B are health hazards:

1. *Carcinogen:* A chemical is considered to be a carcinogen if:

(a) It has been evaluated by the International Agency for Research on Cancer (IARC), and found to be a carcinogen or potential carcinogen; or

(b) It is listed as a carcinogen or potential carcinogen in the *Annual Report on Carcinogens* published by the National Toxicology Program (NTP) (latest edition); or,

(c) It is regulated by OSHA as a carcinogen.

2. *Corrosive:* A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. For example, a chemical is considered to be corrosive if, when tested on the intact skin of albino rabbits by the method described by the U.S. Department of Transportation in Appendix A to 49 CFR Part 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.

3. *Highly toxic:* A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD_{50}) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD_{50}) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC_{50}) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

4. *Irritant:* A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours exposure or by other appropriate techniques, it results in an empirical score of five or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

5. *Sensitizer:* A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

6. *Toxic.* A chemical falling within any of the following categories:

(a) A chemical that has a median lethal dose (LD_{50}) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

(b) A chemical that has a median lethal dose (LD_{50}) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

(c) A chemical that has a median lethal concentration (LC_{50}) in air of

more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

7. *Target organ effects.* The following is a target organ categorization of effects which may occur, including examples of signs and symptoms and chemicals which have been found to cause such effects. These examples are presented to illustrate the range and diversity of effects and hazards found in the workplace, and the broad scope employers must consider in this area, but are not intended to be all-inclusive.

a. Hepatotoxins	Chemicals which produce liver damage
Signs and Symptoms	Jaundice; liver enlargement
Chemicals	Carbon tetrachloride; nitrosamines
b. Nephrotoxins	Chemicals which produce kidney damage
Signs and Symptoms	Edema; proteinuria
Chemicals	Halogenated hydrocarbons; uranium
c. Neurotoxins	Chemicals which produce their primary toxic effects on the nervous system
Signs and Symptoms	Narcosis; behavioral changes; decrease in motor functions
Chemicals	Mercury; carbon disulfide
d. Agents which act on the blood or hematopoietic system	Decrease hemoglobin function; deprive the body tissues of oxygen
Signs and Symptoms	Cyanosis; loss of consciousness
Chemicals	Carbon monoxide; cyanides
e. Agents which damage the lung	Chemicals which irritate or damage the pulmonary tissue
Signs and Symptoms	Cough; tightness in chest; shortness of breath
Chemicals	Silica; asbestos
f. Reproductive toxins	Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (miscarriages)
Signs and Symptoms	Birth defects; sterility
Chemicals	Lead; DBCP
g. Cutaneous hazards	Chemical which affect the dermal layer of the body
Signs and Symptoms	Defatting of the skin; rashes; irritation
Chemicals	Ketones; chlorinated compounds
h. Eye hazards	Chemicals which affect the eye or visual capacity
Signs and Symptoms	Conjunctivitis; corneal damage
Chemicals	Organic solvents; acids

Appendix B to § 1910.1200—Hazard Determination (Mandatory)

The quality of a hazard communication program is largely dependent upon the adequacy and accuracy of the hazard determination. The hazard determination requirement of this standard is performance-oriented. Chemical manufacturers, importers, and employers evaluating chemicals are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the chemicals produced or imported in accordance with the criteria set forth in this Appendix.

Hazard evaluation is a process which relies heavily on the professional judgment of the evaluator, particularly in the area of chronic hazards. The performance-orientation of the hazard determination does diminish the duty of the chemical manufacturer, importer or employer to conduct a thorough evaluation, examining all relevant data and producing a scientifically defensible evaluation. For purposes of this standard, the following criteria shall be used in making hazard determinations that meet the requirements of this standard.

1. *Carcinogenicity:* As described in paragraph (d)(4) and Appendix A of this section, a determination by the National Toxicology Program, the International Agency for Research on Cancer, or OSHA that a chemical is a carcinogen or potential carcinogen will be considered conclusive evidence for purposes of this section.

2. *Human data:* Where available, epidemiological studies and case reports of adverse health effects shall be considered in the evaluation.

3. *Animal data:* Human evidence of health effects in exposed populations is generally not available for the majority of chemicals produced or used in the workplace. Therefore, the available results of toxicological testing in animal populations shall be used to predict the health effects that may be experienced by exposed workers. In particular, the definitions of certain acute hazards refer to specific animal testing results (see Appendix A).

4. *Adequacy and reporting of data:* The results of any studies which are designed and conducted according to established scientific principles, and which report statistically significant conclusions regarding the health effects of a chemical, shall be a sufficient basis for a hazard determination and reported on any material safety data sheet. The chemical manufacturer, importer, or employer may also report the results of other scientifically valid studies which tend to refute the findings of hazard.

Appendix C to § 1910.1200—Information Sources (Advisory)

The following is a list of available data sources which the chemical manufacturer, importer, or employer may wish to consult to evaluate the hazards of chemicals they produce or import:

— Any information in their own company files such as toxicity testing results or illness experience of company employees.

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Condensed Chemical Dictionary
Van Nostrand Reinhold Co., 135 West 50th Street, New York, NY 10020

The Merck Index: An Encyclopedia of Chemicals and Drugs
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IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man
Geneva: World Health Organization, International Agency for Research on Cancer, 1972–1977. (Multivolume work), 49 Sheridan Street, Albany, New York

Industrial Hygiene and Toxicology, by F. A. Patty
John Wiley & Sons, Inc., New York, NY (Five volumes)

[Appendix C to Sec. 1910.1200]

Clinical Toxicology of Commercial Products
Gleason, Gosselin and Hodge
Casarett and Doull's Toxicology: The Basic Science of Poisons
Doull, Klaassen, and Amdur. Macmillan Publishing Co., Inc., New York, NY
Industrial Toxicology, by Alice Hamilton and Harriet L. Hardy
PSG Publishing Sciences Group, Inc., Acton, MA
Toxicology of the Eye, by W. Morton Grant
Charles C. Thomas, 301-327 East Lawrence Avenue, Springfield, IL
Prevention of Health Hazards in Industry
William A. Burgess, John Wiley and Sons, 605 Third Avenue, New York, NY 10158
Chemical Hazards of the Workplace
Nick H. Proctor and James P. Hughes, J. P. Lipincott Company, 6 Winchester Terrace, New York, NY 10022
Handbook of Chemistry and Physics
Chemical Rubber Company, 18901 Cranwood Parkway, Cleveland, OH 44128
Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment with Intended Changes
American Conference of Governmental Industrial Hygienists, 6500 Glenway Avenue, Bldg. D-5, Cincinnati, OH 45211

Note.—The following documents are on sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Occupational Health Guidelines
NIOSH/OSHA (NIOSH Pub. No. 81-123)
NIOSH/OSHA Pocket Guide to Chemical Hazards
NIOSH Pub. No. 78-210
Registry of Toxic Effects of Chemical Substances
U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health (NIOSH Pub. No. 80-102)
The Industrial Environment—Its Evaluation and Control
U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health (NIOSH Pub. No. 74-117)

Miscellaneous Documents—National Institute for Occupational Safety and Health
1. Criteria for a recommended standard . . . Occupational Exposure to "——"
2. Special Hazard Reviews
3. Occupational Hazard Assessment
4. Current Intelligence Bulletins

Bibliographic Data Bases

Service Provider and File Name

Bibliographic Retrieval Services (BRS), Corporation Park, Bldg. 702, Scotia, New York 12302
AGRICOLA
BIOSIS PREVIEWS
CA CONDENSATES
CA SEARCH
DRUG INFORMATION
MEDLARS
MEDOC
NTIS
POLLUTION ABSTRACTS
SCIENCE CITATION INDEX
SSIE
Lockheed—DIALOG, Lockheed Missiles & Space Company, Inc., P.O. Box 44481, San Francisco, CA 94144
AGRICOLA
BIOSIS PREV. 1972-PRESENT
BIOSIS PREV. 1969-71
CA CONDENSATES 1979-71
CA SEARCH 1972-76
CA SEARCH 1977-PRESENT
CHEMNAME
CONFERENCE PAPERS INDEX
FOOD SCIENCE & TECH. ABSTR.
FOODS ADLIBRA
INTL. PHARMACEUTICAL ABSTR.
NTIS
POLLUTION ABSTRACTS
SCISEARCH 1978-PRESENT
SCISEARCH 1974-77
SSIE CURRENT RESEARCH
SDC—ORBIT, SDC Search Service, Department No. 2230, Pasadena, CA 91051
AGRICOLA
BIOCODES
BIOSIS/BIO6973
CAS6771/CAS7276
CAS77
CHEMDEX
CONFERENCE
ENVIROLINE
LABORDOC
NTIS
POLLUTION
SSIE
Chemical Information System (CIS), Chemical Information Systems Inc., 7215 Yorke Road, Baltimore, MD 21212
Structure & Nomenclature Search System
Acute Toxicity (RTECS)
Clinical Toxicology of Commercial Products
Oil and Hazardous Materials Technical Assistance Data System
National Library of Medicine, Department of Health and Human Services, Public Health Service, National Institutes of Health, Bethesda, MD 20209
Toxicology Data Bank (TDB)
MEDLIN
TOXLINE
CANCERLIT
RTECS

§1910.1499 Source of standards.

Section 1910.1000— 41 FR 30-204 50, except for Table Z-2, the source of which is American National Standards Institute, Z37 series.

[Sec. 1910.1499 added at 40 FR 23073, May 28, 1975]

§ 1910.1500 Standards organizations.

Specific standards of the following organizations have been referred to in this subpart. Copies of the standards may be obtained from the issuing organization.

American Conference of Governmental Industrial Hygienists
1014 Broadway
Cincinnati, Ohio 45202

American National Standards Institute
1430 Broadway
New York, New York 10018

[Section 1910.1500 added at 40 FR 23073, May 28, 1975, corrected at 43 FR 57601, December 8, 1975, to delete listing of National Fire Protection Association]

ADDENDUM 2

APPENDIX B

more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

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John Wiley & Sons, Inc., New York, NY (Five volumes)

[Appendix C to Sec. 1910.1200]

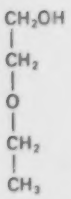
ADDENDUM 3

Eastman CHEMICALS

Publication No. M-152E
November 1983

EKTASOLVE® EE
ethylene glycol monoethyl ether

CAS No. 111-90-5



Typical Properties*

Molecular Weight ($C_4H_{10}O_2$)	90.12
Color (Pt-Co Scale), max	10
Evaporation Rate (n-butyl acetate = 1)	0.3
Specific Gravity at 20°/20° C	0.93
Weight/Vol at 20° C.	
lb/gal (U.S.)	7.75
kg/L	0.93
Solubility at 20° C, wt %	
In water	Complete
Water in	Complete
Dilution Ratio, Toluene	5.0
VM & P naphtha	1.1
Refractive Index at 20° C	1.41
Vapor Pressure at 20° C, mm Hg	3.8
Boiling Range at 760 mm, °C	
Initial	134
Dry Point	136
Freezing Point, °F (°C)	-137 (-94)
Flash Point, Tag Closed Cup, °F (°C)	110 (43)
Tag Open Cup, °F (°C)	118 (48)
Fire Point, °F (°C)	118 (48)
Flammable Limits in Air, % by volume	
Lower, at 200°F (93°C)	1.7
Upper, at 200°F (93°C)	15.6
Autoignition Temperature (ASTM D 2155), °F (°C)	460 (238)
NFPA Classification 30	II
DOT Classification	Combustible Liquid
DOT Labels Required	None

*Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform to the listed figures.

EASTMAN CHEMICAL PRODUCTS, INC., Kingsport, Tennessee
EASTMAN CHEMICAL INTERNATIONAL COMPANY, Kingsport, Tennessee
EASTMAN CHEMICAL INTERNATIONAL A.G., Zug, Switzerland
EASTMAN CHEMICAL INTERNATIONAL LTD., Kingsport, Tennessee
EASTMAN CHEMICAL BRASILEIRA LTDA., Sao Paulo, Brazil
Marketing affiliates of Eastman Kodak Company

FEATURES

Eastasolve EE solvent is a colorless, low odor, stable liquid with a low evaporation rate and complete water miscibility. This product imparts excellent flow properties and high gloss to thermoplastic and thermosetting coating systems. It is widely used in "cutting" epoxy resins during the manufacturing process and as the actual solvent in epoxy coating systems. A good solvent for cellulosic lacquers, it improves flow-out and gloss. It can be used in hot-spray lacquers in combination with esters or ketones. Other applications include use in dyes, alkyd baking enamels, varnish removers and metal and glass cleaners; as an aid in the printing and dyeing of textiles and leathers; as an active solvent in epoxy/polyamide coatings; a retarder solvent in flexographic printing inks; a coupling agent in waterborne coating systems; and a component in hydraulic fluids. The solvent performance of Eastasolve EE is indicated by the following data.

Comparison of Solvent Activity

EASTMAN* Solvents	Evap. Rate	Blush Res., % RH at 80° F (27° C)	Solution Viscosity at 25° C, cP	
			½ Sec Nitrocellulose Regular Grade*, 10 Wt%	Ehecite 2010 Resin*, 20 Wt%
Isobutyl Isobutyrate	0.4	92	126	Insol
Eastasolve EE	0.3	58	105	224
Eastasolve EP	0.2	80	133	Insol
Diisobutyl Ketone	0.2	95	160	Insol
Eastasolve EB	0.1	86	255	Insol

*product of Hercules Incorporated †product of Du Pont Company

FOR ADDITIONAL INFORMATION
About EASTMAN Chemicals, Fibers, and Plastics

FROM THESE AREAS	VISIT OR WRITE TO	OR CALL
The UNITED STATES Except states listed below	**EASTMAN CHEMICAL PRODUCTS, INC.***	
	P. O. Box 431 Kingsport, TN 37662	Toll-free (800) 251-0351 (From within Tennessee, call (800) 352-0301) Twx: (810) 574-5174 Telex: 553450 Cable: EASTCHEM, Kingsport, Tennessee
	ADDITIONAL OFFICES FOR TEXTILE FIBERS	
	New York, NY 10036, 1133 Avenue of the Americas	(212) 930-8000
	Los Angeles, CA 90015, California Mart, Suite A-1379, 110 East Ninth Street	(213) 624-6241 or (213) 624-6245
	ADDITIONAL OFFICES FOR DYES AND TEXTILE CHEMICALS	
	Charlotte, NC 28216, 4401 Chesapeake Drive	(704) 392-7441
	Santa Fe Springs, CA 90670, 12805 Busch Place	(213) 946-2311
States of Alaska†, Arizona, California, Colorado†, Hawaii, Idaho, Montana†, Nevada, New Mexico†, Oregon, Utah, Washington, and Wyoming†. †Chemicals only—not plastics.	Western representative for plastics and chemicals except monoglycerides, Vitamin E, and C-A-P **WILSON & GEO. MEYER & COMPANY**	
	Santa Fe Springs, CA 90670, 12805 Busch Place	(213) 946-2311
	Portland, OR 97217, 12200 N. Jantzen Avenue, Suite 210	(503) 285-1468
	Englewood, CO 80111, 5680 South Syracuse Circle, Suite 300	(303) 773-8755
	Seattle, WA 98109, 318 Queen Anne Avenue, North	(206) 284-1620
	South San Francisco, CA 94080, 270 Lawrence Avenue	(415) 871-1770
CANADA and LATIN AMERICA (except BRAZIL)	**EASTMAN CHEMICAL INTERNATIONAL LTD.***	
	Kingsport, TN 37662, P. O. Box 431	(615) 229-2000
	(Toronto) Don Mills, Ontario, Canada M3C 1J5, 40 Wynford Drive	(416) 449-0160
	Montreal, Quebec, Canada H4B 2Y4, EASTMANCHEM, INC. 2525 Cavendish Blvd., Suite 115	(514) 483-1180
	Puerto Rico: Dial direct (toll free)	137 (800) 251-0351
BRAZIL	**EASTMAN CHEMICAL BRASILEIRA LTDA.***	
	Sao Paulo, Brazil, Rua George Eastman, Caixa Postal 225	542-8463
EUROPE, AFRICA, the MIDDLE EAST, and the NEAR EAST	**EASTMAN CHEMICAL INTERNATIONAL A.G.***	
	6300 Zug 3, Switzerland, Hertisentrum 6	(042) 232525
	75012 Paris, France, 19 Rue Villiot	(1) 347-85-55 or (1) 347-87-45
	20124 Milan, Italy, Via Rosellini 12	(02) 688-4563
	Hemel Hempstead, Herts, HP1 1JU England, P. O. Box 66, Kodak House, Station Road	(0442) 41171
ASIA, AUSTRALIA, and NEW ZEALAND	**EASTMAN CHEMICAL INTERNATIONAL COMPANY***	
	Kingsport, TN 37662, P. O. Box 431	(615) 229-2000
	Hong Kong, 1505 Guardian House, P. O. Box 47025, Morrison Hill Post Office	5-748351
	EASTMAN CHEMICAL INTERNATIONAL LTD.*	
	(Sydney) Chatswood, New South Wales, Australia 2067, 3-9 Spring Street, Suite No. 3, P. O. Box 426	411-3399
	Singapore 0409, #09-23 World Trade Centre	278-8011 or 278-8012

*DESIGNATES MARKETING AFFILIATES OF EASTMAN KODAK COMPANY

Material Safety Data Sheets providing safety precautions that should be observed in handling and storing Eastman products are available on request. You should obtain and review the available material-safety information before handling any of these products. If any materials are mentioned that are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

Neither Eastman Kodak Company nor its marketing affiliates shall be responsible for the use of this information, or of any product, method or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability or fitness of any product; and nothing herein waives any of the Seller's conditions of sale.

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Publication No. M-152E
November 1983

ECP 3582 (11-82)

Printed in U.S.A.

Mr. GAYDOS. I have concern, too, because we waited a long time to get some kind of a standard, whether it is good or bad. We waited 12, 15 years or so, so I don't know how it is going to work.

Let me ask you a couple of practical questions.

Ms. HEZA. Sure.

Mr. GAYDOS. You mentioned that the Federal hazard communication standard fails to provide a standard criteria for identifying hazards, and you raise the issue of who is to determine if the substance in the workplace is hazardous.

Ms. HEZA. Yes.

Mr. GAYDOS. How should we go about identifying those substances which will pose health hazards, and who should do the research work, especially in light of your comment that few unions or agencies or companies have the resources and experience to do that? How are we going to do it? You mentioned something about education and more than once a year, you know, on a regular basis, but is that sufficient?

Ms. HEZA. Once a year should be the minimum——

Mr. GAYDOS. Minimum.

Ms. HEZA [continuing]. For training and education——

Mr. GAYDOS. Do you have any other ideas on how to do it, how to force——

Ms. HEZA. I am sorry, what?

Mr. GAYDOS. Do you have any other ideas or approaches to the problem as to——

Ms. HEZA. Training or determining toxicity?

Mr. GAYDOS. We have gone through in this committee for years—as long as I have been on it—always talking about training. Miners going down below; whether we are training miners above—it is all right to talk about training, but I have gone to some of those training classes and it just depends, again, on who is holding them and how dedicated the people are and whether they want to learn or not and whether or not they go through the motions as such.

Do you have any other ideas or concepts other than the training educational aspect, because we hear that all the time. You know, it is like a broken record. I am not criticizing it, but I am saying that having been exposed to it out there, I find a lot of deficiencies in that approach, that solution, or that approach to the solution.

Do you have any other ideas how we can effectively put into effect knowledge? I know it is a very difficult thing to make sure that knowledge is made available or gleaned by the person from other sources, rather than a training class which a lot of people sleep through, to put it that way.

Ms. HEZA. I agree in part. Training sessions that I have heard about from our members, that they get from their employer, are totally inadequate, but we do emphasize training because that is how we serve our members the best and that is the bulk of our job. We do some technical assistance and some research for them, but we spend most of our time on the road training our members on their rights under OSHA and how to interpret the standards.

I happen to disagree with your statement that training and education is ineffective. I feel that training and education is the single most important tool at our disposal. How to implement adequate training on a company-to-company basis, I don't know.

But there has to be some sort of program—I think training and education is very important. That is easy to say, but I can't be in each individual workplace and I cannot dictate what these employers are going to cover, what the curriculum is going to entail.

Mr. GAYDOS. I want you to know that I feel frustrated. We have waited an awful long time. I don't know the adequacy of the standards about to take effect in September, October, sometime in November of this year. I want you to know that millions of dollars were expended on brochures and pamphlets and I took the personal privilege of making an attempt to try to follow them and to ask practical questions among the employees up in our area—my area, which is around the Pittsburgh area.

When you receive it, what do you do with it? Do you read it? Do you understand it? I am very sorry to report to you here publicly, and as a matter of record, that substantially a large number of the people do not read it, do not comprehend it and even the classes that are made available—they are attended with reluctancy at times. There is not an authentic desire to want to assume the information, to assimilate the information and I am just wondering, maybe we ought to have some kind of incentive or some kind of a bonus program or something whereby we would be, after a fact, through some mythology—and I don't know what it is—forcing people to learn more efficiently and more effectively. That is what bothers me.

I tell you, I find this permeating all of our programs and we have—and I myself, personally, urge and advocate education information, you know, display of information by example and by writing and reading and things like that. Unfortunately, again I have to go back to my old description, health and safety is not a sexy subject and people just are not taken to it. They just will not take advantage of what is made available to them, whether it is in a practical training group or whether it is in writing or whether it is through example or through cartoons or what have you. We have gone the whole gamut, using certain types of cartoons.

I remember one of the agencies that advocated that, where they had Marvel, the Masked Marvel and stuff like that that they used in cartoon form. There was a question as to whether that was effective.

I am not degrading nor am I criticizing the educational level of our people, the blue-collar work force. I think they are more educated, probably, than any country in the world, but still we have difficulty in getting information across. I thought maybe you might have a novel approach to it which we could take and hopefully educate our people, rather than just saying education classes and stuff like that, which I have my sincere doubts effectively do what they should do or what they could do, put it that way.

Ms. HEZA. Novel approach, no. We feel that our training is very successful, but, of course, we reach maybe 100 to 300 members a year and so it is going to take a long time. We try to make the Department as well known as possible to our members throughout the country and there has been increased interest as a result of that. All I could suggest is that perhaps if using media, using TV may provide a means of reaching people—asbestos would be a great example. People never worried about asbestos until it started

getting all this press and now asbestos is a real hot subject. So a practical approach, maybe, would be to start publicizing to people the possible hazards they are being exposed to in the workplace and what their rights are under the law, how to protect themselves.

Mr. GAYDOS. I just hope we don't reach the position where we say you can lead a horse to the water, but you can't make him drink. I don't know. I hope that is not the situation. I get very frustrated at times.

Let me ask you some practical questions. You state that you feel the safety data sheets are insufficient in many respects, and in a lot of areas, I agree with you. What remedy would you suggest? Who should prepare those safety data sheets? Should we have an overall government agency overseeing it or should there be some coalition between the union representative and the management sitting down preparing them or who should be the last word as to what goes in there to make sure we have a comprehensive and effective safety data sheet and that the information therein is sufficient? How do you do that?

Ms. HEZA. I think without a doubt that the chemical manufacturers should have complete responsibility and total liability for everything that is in those material safety data sheets and if there are established guidelines that manufacturers have got to adhere to, I would think that that would be sufficient to ensure accuracy and effectiveness. This information is in the public domain and anyone can see it and anyone can check up on it. That, I think, would be a sufficient incentive to make sure that the information on there was up to date and was accurate because anybody could check it and maybe there needs to be some sort of penalty if there is some false information on material safety data sheets.

Without a doubt, there is no question in my mind that the responsibility and liability should be the manufacturer's.

Mr. GAYDOS. Shouldn't a collective bargaining unit have some responsibility——

Ms. HEZA. No, because they are not qualified. They are not chemists; they are not physical chemists; they are not toxicologists; they do not have the qualifications whatsoever to have anything to do with that. They are not the ones that manufacture the chemical. They are not the ones who are putting the chemicals in the workplace and putting the chemicals on the market and exposing the public to them, so they should not be liable or responsible for that information, or for disseminating that information.

Mr. GAYDOS. I was wondering, before we had OSHA, particularly in the steel industry, as distinguished from other types of industry and particularly small business, the safety committees that they had were way far ahead of anybody else. They had physical inspection of cranes and working conditions and there were complaints made and corrections made and it worked from a practical standpoint. Metatarsal shoes and things of that nature were in effect way before we even dreamed about OSHA down here in Congress.

So I was wondering if it wouldn't be of some value if we did have participation, some way in accumulating, putting together and finally determining what would be in that safety data sheet so that it would be effective, would be an effective deterrent. You know,

advance warning and do what supposedly it can and should do, give information for many purposes, particularly safety, and also for ameliorating type of actions that are required periodically.

Ms. HEZA. I think if your average paperworker was informed of the fact that maybe somewhere down the line he can be held liable for someone's occupational disease because he had something to do with the input on the material safety data sheet, I don't think they would be willing to do that. I don't think they should be asked to do it because I don't think they are qualified. Chemical companies have got people who went to college for years to specialize in these areas. They should be the ones to do it.

Mr. GAYDOS. You are pretty solid on that, OK.

Ms. HEZA. Yes.

Mr. GAYDOS. I call Mr. Chandler, from the State of Washington.

Mr. CHANDLER. Thank you, Mr. Chairman.

First, let me thank you for allowing staff to assist me by asking some questions in the past hearing. Unfortunately, I have a mark-up at 10 in another committee and I will have to be leaving.

Mr. GAYDOS. Let the record show, Mr. Chandler, that they are so efficient that they embarrass me. They asked tough questions.

Mr. CHANDLER. Did they? Good.

Mr. GAYDOS. It is our pleasure and I think it is the way it should be under some of the circumstances since we have a limited committee.

Mr. CHANDLER. I appreciate your accommodating them.

I thought you raised some very legitimate questions and one occurs to me; whether the issue here is one of liability or education? I keep hearing you say that the union should not be held liable, that the employer should, yet what we are talking about is information and education. Are we talking two different subjects here?

Ms. HEZA. No. When I was talking about liability, I was referring specifically to the question that Mr. Gaydos asked me: Who should have the input on the material safety data sheet? The main thrust of what I am trying to say is there is the need for education and training—the question as to who should be responsible for information on those data sheets is where the liability issue came in.

Mr. CHANDLER. Isn't it correct that these standards now offer the first time we have ever had a training requirement in the regulations? Isn't that correct?

Ms. HEZA. There is a very general training provision. It is not spelled out.

Mr. CHANDLER. But doesn't it give some recourse back to the department for workers to complain and bring in an investigation to see if the training is adequate?

Ms. HEZA. Sure. Any worker has always had that right under the OSHA administration if they feel that an OSHA standard is not being enforced, but you also hear, if you speak to these workers, that it is not that easy to get OSHA into the workplace to begin with because of their reduced manpower. Because the training is not standardized, I think it brings up the whole other issue that there is going to be a lot of inconsistency in the quality of the training from workplace to workplace. Also, how is the worker

going to know whether or not their training is inadequate if there are not specific guidelines that have to be met?

Mr. GAYDOS. Would the gentleman yield to me for a minute?

Mr. CHANDLER. Sure.

Mr. GAYDOS. Would an industrial hygienist serve some purpose if they were given some authority in setting up the safety data sheets and materials and prerequisites?

Ms. HEZA. Yes.

Mr. GAYDOS. Is that out of your——

Ms. HEZA. I think there could definitely be some more input there.

Mr. GAYDOS. There would be some value in contributing—a contributing factor to the overall——

Ms. HEZA. In establishing the guidelines of what information should be included, yes.

Mr. GAYDOS [continuing]. Effectiveness, yes.

How long have you been an industrial hygienist?

Ms. HEZA. One year.

Mr. GAYDOS. Do we have difficulty finding sufficient numbers, recruitment and things like that? Is there difficulty yet in that field?

Ms. HEZA. No; I don't think so. There are not a lot of us, granted, but——

Mr. GAYDOS. Because at one time, we couldn't find enough industrial hygienists.

Ms. HEZA. I think it has become an up-and-coming occupation only because OSHA has become more popularized

Mr. GAYDOS. Let me ask you, before you can identify yourself as an industrial hygienist—is that a major? Do you major in it? Is that a degree, a specific degree——

Ms. HEZA. No; it was on-the-job training. I have a degree in biology, but the training was provided by the union.

Mr. GAYDOS. Generally, for my own information and as a matter of record, can you have a different type of a degree and still end up being an industrial hygienist by taking——

Ms. HEZA. Sure. As a matter of fact, I was just in Hyannis and I spoke to a former paperworker who was fired from his job because he tried to enforce his right to refuse unsafe work. He was very involved in health and safety from a health and safety committee standpoint. At the time—after he lost his job, he was hired by OSHA as an industrial hygienist and received training from the Federal Government and he had no—I don't believe he had any college education at the time.

Mr. GAYDOS. When we put the act together, I did not think there was any such animal as an industrial hygienist because—and I know some of the universities came out with a degree or a major—I don't know what they call it—they gave them a degree. If it was a degree in industrial hygienist——

Ms. HEZA. Yes; there is.

Mr. GAYDOS. Is that what it is?

Ms. HEZA. Yes; there is—I think it is a master's program.

Mr. GAYDOS. I can't remember back. This is 10 to 12 years ago and I remember we had that difficulty, but you say now—I will get back on track—you say now that there is sufficient personnel in

the field and that there is no critical shortage like existed, real or imagined, some 10 or 15 years ago.

Ms. HEZA. There are sufficient people in the field. There might not be sufficient people in the Federal Government, but there are sufficient people in the field; yes. Certainly there is always room for more, but that takes the commitment of corporate America to hire one. I know that there are hygienists out there out of work.

Mr. GAYDOS. I could say, then, with some authenticity, that an industrial hygienist is not a rare bird anymore.

Ms. HEZA. Not anymore, I don't think so.

Mr. GAYDOS. Mr. Chandler, do you have any more questions?

Mr. CHANDLER. No.

Mr. GAYDOS. I would like to ask this one question.

I have complained in the past hearings that there was some justification and sometimes there was not justification for the trade secret argument. We had many witnesses before us who actually put a pin in the balloon, those who argued that trade secrets are very fundamentally essential; you should be protected. We found other witnesses that pretty clearly set forth that that was not the case.

On the other hand, we have found some manufacturers that had a legitimate position as far as trade secrets are concerned. Now, assuming that to be true—and I am not saying it is true in most cases or a greater percentage of cases, but there are some cases when it could be true—how would you attack that problem?

Ms. HEZA. There is one possible solution that I have heard. Many times what is trade secret is not necessarily the chemicals that are in a particular compound, because probably any analytical chemist could come up with what is in any given compound, but it is the amounts of the constitutents that are put into this compound that could be eliminated from the material safety data sheet. It could still list the ingredients in the compound while maintaining its trade secret status.

Mr. GAYDOS. In other words, you are saying identify what is in there but don't get into the specific proportional portion and things like that.

Ms. HEZA. Right. That would be, I think, one way of resolving that problem.

Mr. GAYDOS. All right, I have no further questions. I want to thank you for your presence and if you would be so kind, if we did send to you, either the majority or minority side, any questions or interrogatories, if you would be so kind as to respond and answer them as adequately and completely as you can because it would be most important for the benefit of the committee.

This committee is somewhat shrunken for many reasons. The entire Education and Labor Committee has shrunk somewhat, basically. There are temporary slots on it, and I want you to know that because of that, you might not find as many here as should be here, but the information is being made available. People do call for the publicized record and we can't keep enough of them, so somebody is reading it and somebody is studying it. So I want you to know that for that purpose, your efforts and your work are not wasted.

Ms. HEZA. Thank you.

Mr. GAYDOS. Thank you very much.

The Chair now calls David Mallino, the deputy legislative director, Industrial Union Department of AFL-CIO; accompanied, I understand, by David Ortlieb, health and safety director of International Chemical Workers Union; and Salvatore Falletta, general counsel, International Chemical Workers Union.

Gentlemen, welcome to the committee. You heard me talking about the committee and who is on it and who is present, so don't let the absence of committee members disturb your sincere testimony. It is effective; it is important; and a lot of people are reading it.

My good friend, David, you proceed in the best way that will suit your purposes. Do you want to summarize; do you want to give your testimony; any way you want to do it.

STATEMENT OF DAVID MALLINO, DEPUTY LEGISLATIVE DIRECTOR, INDUSTRIAL UNION DEPARTMENT, AFL-CIO; DAVID ORTLIEB, HEALTH AND SAFETY DIRECTOR, INTERNATIONAL CHEMICAL WORKERS UNION; SALVATORE FALLETTA, GENERAL COUNSEL, INTERNATIONAL CHEMICAL WORKERS UNION; AND E. ROBERT MARLOW, WASHINGTON REPRESENTATIVE, INTERNATIONAL CHEMICAL WORKERS UNION

Dr. MALLINO. Mr. Chairman, I just have a short statement and I think I will just read it and hopefully it will not take very long.

Mr. Chairman, members of the subcommittee, my name is David Mallino and I am the deputy legislative director of the Industrial Union Department of the AFL-CIO. At the outset, Mr. Chairman, let me say that the Industrial Union Department and its 55 affiliated unions considers OSHA's record over the last 4 years to be abominable in every area of its jurisdiction, from standard setting and enforcement to worker safety and health training and internal personnel management.

Indeed, just last week, the newspapers carried the story of a recent OSHA management meeting where threats were made to take names and get rid of troublemakers, something which we believe is aimed at those OSHA professionals who have refused to become politicized and are intent on doing their jobs in spite of political pressures.

We sincerely hope that the Secretary of Labor will immediately follow up on his stated intention to review OSHA's performance and place the agency back on the track of protecting the safety and health of American workers. Nowhere is OSHA's performance been more wanting than in the area of standard-setting and the OSHA hazard communication standard is one of its greatest failures.

While the agency claimed the standard was the most far-reaching and protective OSHA regulation ever issued, in reality, its real purpose was to preempt State and local right-to-know laws rather than to protect workers.

The major defects in the standard include: First, it limits coverage to only the manufacturing sector, SIC Codes 20 through 39; thereby excluding some 80 percent of the work force in such industries as construction, services, transportation, and others outside the covered SIC Codes. Second, its principal means of communicating hazard information is by use of material data sheets which are,

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at best, cumbersome for transmitting information. There is no or little labeling requirement that would allow workers immediate access to necessary information. Third, its trade secrets provisions is so broad that chemical manufacturers and employers can claim almost any chemical as a trade secret and thereby withhold information from exposed workers.

Access to supposed trade secrets is available only to health professionals and then only under very limited circumstances.

Fourth and finally, the standard seeks to preempt State and local right-to-know laws. As you know, Mr. Chairman, a Federal court recently upheld the OSHA preemption by essentially declaring the New Jersey worker right-to-know provisions invalid. Of course, the issue of right-to-know, of State and local right-to-know laws, would not even be an issue if the Reagan administration had built upon the solid work of the previous administration and issued an adequate and effective standard. On the contrary, within days of assuming office, the Reagan administration, at the request of the chemical industrry, withdrew the previously proposed standard in an effort to kill the right-to-know movement. The effect, of course, was to stimulate the labor movement and its environmental and consumer allies to turn to the States and communities for right-to-know protection.

As a result, there are today some 19 States which have enacted right-to-know statutes. These laws vary in scope, coverage and requirements. Many go beyond the workplace and include community right-to-know protection. Some cover only a limited number of chemicals, while others are more comprehensive.

The labor movement, of course, would prefer a single Federal standard that establishes uniform requirements that adequately and effectively provide workers with the necessary information about hazards they confront. That is OSHA's mandate, a mandate that its leadership under this administration has thus far failed to carry out. We sincerely hope that Secretary Brock will intervene in this situation and among other policy changes, direct OSHA to upgrade the Federal Hazard Communication Standard to meet the legitimate requirements of exposed workers and their representatives.

Failing that, and failing our legal appeal of the standard itself, we believe that the Congress and this committee should consider a Federal legislation to ensure workers the basic right to know the hazards to which they are exposed.

There is, of course, another dimension to the right-to-know issue. In addition to their right to know the hazards, workers also have the fundamental right to know the risk of disease they confront as a result of workplace exposures. As a result of the occupational health research that has been conducted over the last 15 years, we know that there are millions of workers in well-defined occupational populations that have been exposed to hazardous substances and are at varying degrees of risks of eventually contracting an occupational disease.

Medical science also knows that for many diseases, the key to successful treatment is to identify the biological manifestation of disease as early as possible. We believe that the time has come to establish a Federal program to identify, notify, counsel, and pro-

vide some level of medical surveillance for workers at known risk to disease because of hazardous occupational exposures. Such a program would go far towards one, preventing occupational disease by better protecting high-risk workers from further exposure and by early medical intervention techniques; and second, by successfully treating such diseases in the very early stages of manifestation.

We raise the issue here today in order to commend you, Mr. Chairman, for your intense interest in this subject and your bill, H.R. 1309, the High-Risk Occupational Disease Notification and Prevention Act, which addresses this issue. The labor movement believes that H.R. 1309 deserves priority consideration by the Congress and we look forward to working with you and other Members to bring it to the House floor in final enactment.

For more than a decade now, organized labor has been fighting for strong Federal right-to-know protections. We have been seeking regulations that will ensure workers and their representatives effective access to information concerning the specific chemicals and chemical hazards in the workplace. Thus far, we have been denied.

However, I can assure you, Mr. Chairman, that the labor movement will use all of the resources at its disposal to continue this effort in whatever forum it presents itself, whether it be the Department of Labor, Federal courts, State and local legislatures, or the Congress. The issue is real and must be addressed.

Thank you, Mr. Chairman.

Mr. GAYDOS. Do you have statements from your colleagues?

Dr. MALLINO. Mr. Ortlieb.

Mr. ORTLIEB. Yes, Mr. Chairman.

First, I would like to say that——

Mr. GAYDOS. Let me interrupt you. Let the record show, without objection, that your entire statement as formally presented will be made part of the record because I have to presume that was a summary.

Dr. MALLINO. That was the statement.

Mr. GAYDOS. That was the statement. Doctor, you say a lot in a very short period, so we are very happy you saw fit to make a short, but concise and effective statement.

Mr. ORTLIEB. Yes, Mr. Chairman——

Mr. GAYDOS. That is a little clue to you. [Laughter.]

Mr. ORTLIEB. I am going to take about 15 minutes, if I could.

Mr. GAYDOS. OK. You came down here and I am just kidding you. You just go ahead and take as much time as you want.

Mr. ORTLIEB. OK.

Mr. GAYDOS. If I get tired, you won't see us sitting up here, so——

Mr. ORTLIEB. I will try to keep it as brief as possible.

Mr. GAYDOS. Go ahead.

Mr. ORTLIEB. First, I would like to announce that we also have Bob Marlow, our Washington representative, as a part of the Washington delegation.

Mr. GAYDOS. Let the record show that Mr. Marlow is here.

Mr. ORTLIEB. He is also available to answer questions, as well as our chief counsel, Salvatore Falletta.

I also want to make the Chair aware of the fact that we added an additional section to our comments. I informed your assistant,

Sy Holzman, of that fact and specifically that would be item No. 3 on the first page of our testimony, titled "Inadequacy of the OSHA Federal Hazard Communication Standard and Existing Federal Legislation to Deal with High-Hazard Substances."

So there is a number of pages that have been added within that section and I will be dealing with those comments also today.

Mr. GAYDOS. Without objection, your statement as prepared will be made part of the record and if you have any amendments, they will be included therein.

Mr. ORTLIEB. OK, thank you very much, Mr. Chairman.

As you know, I am director of health and safety for the International Chemical Workers Union. The ICWU is a labor organization which has just completed 40 years of representing workers in the chemical industry in North America.

We are headquartered in Akron, OH. Our president is Frank D. Martino. We currently represent about 60,000 workers in the U.S. chemical industry. We have contracts primarily on a plant-by-plant basis with major chemical producers such as Occidental, Monsanto, Dupont, American Cyanamid, Unilever, and W.R. Grace. We also represent medium and small work forces in the chemical sector.

Certainly we appreciate the opportunity to address your subcommittee on these timely and vital matters.

My comments this morning deal with three major topics. First, limits of the OSHA hazard communication standard, even if companies were at or near compliance; second, our experience in the chemical industry which demonstrates the lack of worker awareness of hazards and the inadequate efforts of companies to provide information; and finally, the inadequacy of the OSHA hazard communication standard and existing Federal legislation to deal with high-hazard substances, such as methyl isocyanate, which, of course, was the bad actor in the tragic Bhopal mishap.

Mr. GAYDOS. Director, if I may interrupt you—I don't want to get you off track because once you start, you want to go and follow through.

Mr. ORTLIEB. Sure.

Mr. GAYDOS. Let me ask you. Up until the time of the OSHA act, what was the Chemical Union doing as far as identifying hazardous material just generally? I never did have that void filled in as to what the industry was doing prior to us passing the act, and Dave, this goes back to our early years with Congressman Dent when we had—when OSHA was a concept at the time.

Could you tell me briefly how you looked at it. Was it just forgotten and nothing done?

Mr. ORTLIEB. What the chemical industry was doing?

Mr. GAYDOS. Yes. How were they——

Mr. ORTLIEB. I would sum that up in two words. Essentially——

Mr. GAYDOS. Nothing.

Mr. ORTLIEB. Well, I won't go as far as nothing, but it was a system, as you know, of voluntary compliance before the passage of the Occupational Safety and Health Act. Voluntary compliance—that is——

Mr. GAYDOS. Voluntary compliance with what?

Mr. ORTLIEB. Well, with whatever—I can't claim to say that I am intimately familiar with all the regulations that existed before the

Occupational Safety and Health Act, but those that were on the books, my impression is that there was a fairly lackadaisical attitude on the part of company management as far as adhering to any laws that might have had a bearing on workplace health and safety.

Now, the Reagan administration—they love to throw around the words "voluntary compliance." Voluntary compliance, in my mind, is equivalent to no compliance. Voluntary compliance is going back to "the good old days" before the passage of the Occupational Safety and Health Administration and in that regard, I would say that I would agree with you that generally there was nothing of any great significance being done.

Mr. GAYDOS. I wanted to get on that point because that has always been a void which most people avoid speaking about, both sides.

Dr. MALLINO. Mr. Chairman, if I could just make one comment on that.

Mr. GAYDOS. Yes, go ahead.

Dr. MALLINO. You recall that before the Occupational Safety and Health Act, there was a system of voluntary standards, mostly safety and health standards that were adopted, the so-called consensus standards that were adopted as soon as OSHA was promulgated. There were also about 450 so-called TLV's, threshold limit values, that had been established by the AGCIH—that stands for something that I cannot recall the total name of the——

Mr. ORTLIEB. American Governmental Conference of Industrial Hygienists.

Dr. MALLINO [continuing]. And those were established, again, as voluntary standards, but even the Labor Department, upon promulgation, indicated that most of them were out of date. Unfortunately, Mr. Chairman, a lot of those standards are still on the books at the same levels as they were set prior to the OSHA Act.

Mr. GAYDOS. That was a loose confederation that we had at that time, made up of the primary producers. In fact, the small ones didn't even participate because they couldn't because of the expense. So we had primarily the large producers meeting on an informal basis, adopting standards and those are the ones we have referred to and identified as existing customary standards. There was very little deterrent efficacy involved in them. They were just put together by a group voluntarily. Whether they were enforced or not was questionable. That was all the justification for us passing the act.

I wondered myself—I have never had the answer even when we were putting the act together—never had the answer to what was going on as a practical matter when some caustic soda of some sort or some benzene or something was being used. How practically was it approached? When we had our union representation in the shop, was it a matter of at arm's length bargaining at the time to try to work something out or was nothing applicable?

That was a void that was never addressed to my satisfaction at the time and I have been along with this from its very inception.

I think, Mr. Falletta, you wanted to respond to that.

Mr. FALLETTA. Yes, if I may. Just a few comments about that.

First, even before OSHA, there was a predecessor governmental organization under the Department of Labor called the Bureau of Occupational Safety and Health that, for several years, did enforce the voluntary compliance or, more likely, the response to emergency situations. Mr. Marlow's own local had experience, I believe, prior to the passage of OSHA where the company, in response to a difficulty with enzymes that they were utilizing in their——

Mr. GAYDOS. We had no standards, though, did we?

Mr. FALLETTA. No, no, that is true, there were not. What they enforced were the consensus standards and also responded to the emergencies as they were identified.

The workers were guinea pigs and the companies frequently utilized those circumstances to respond to them and their difficulties. In addition—and very briefly—there were occupational medical people available to labor organizations in our union back in the late 1940's. Dr. Herbert Abrams, who is currently with the University of Arizona, has been in this area for quite a number of years and regularly ran informative columns in our newspaper, the Chemical Worker, in order to try to bring our membership up to the proper speed.

But clearly, the impetus that OSHA provided, not only at the governmental level, at the professional and educational level for hygienists, but also within the labor movement, has been overwhelming. We have simply been trying to keep up with the members.

Mr. GAYDOS. The chemical workers would be in the vanguard as far as attention to this subject matter because even though we have problems with occupational safety generally, you people, your union, was probably the most affected immediately because you were dealing with chemicals that caused rashes and immediate discernible types of problems.

Mr. FALLETTA. I won't try to gild the lily; the record leaves a lot to be desired and clearly we have come a long way. But, yes, I think there was at least a recognition medically and by some of the leadership.

Mr. GAYDOS. All right. Yes.

Mr. MARLOW. The question was asked, and I was in the plant at the time. I happened to be working in the industry at the time. I wasn't a union representative necessarily, maybe a local guy, but working in the industry and the workers knew nothing. That is basically what happened.

When people started getting sick, and that happened in an enzyme situation that Mr. Falletta mentioned, when workers started getting sick and started having problems and then the union put pressure on the company and eventually, in that particular case, they took that particular product off the market after about 3 years; lots of pressure and lots of negotiations and a lot of other things in meetings with a lot of people, but——

Mr. GAYDOS. That is how they work it.

Mr. MARLOW. The only thing the union could do was put pressure on the company and the workers didn't know anything until they started having rashes and sicknesses and everything else and then we realized we had a problem and then we dealt with pressures. That is how it worked.

Mr. GAYDOS. All right, I am sorry, Mr. Ortlieb. Hope I didn't get you off track.

Mr. ORTLIEB. No, you didn't. I am in good shape.

There will be some concluding remarks about expectations for improvement under the OSHA standard. But first—what I am going to do this morning is summarize section I. There is back-up information provided within our testimony in section I. Certainly, if you have any questions, we would be happy to answer them.

What I will be doing now is to refer you directly to page 5 of our testimony. That is, the page that we are now on, if we count up to the fifth page, at the very top, it reads "Over 5,000 complaints for retaliatory discharge"—I am going to begin at the fourth paragraph and start at that point where it reads, "To summarize this section of my comments." Do you find that, Mr. Chairman?

Mr. GAYDOS. I have it right here.

Mr. ORTLIEB. OK.

Mr. GAYDOS. Have your secretary put numbers on the pages next time. [Laughter.]

Mr. ORTLIEB. Well, it is my fault.

Again, the first section is titled Limits of the OSHA Federal Hazard Communication Standard Even if Companies Were at or Near Compliance. To summarize this section, companies may, indeed, be at or near compliance with the standard. However, on these facts, compliance is a charade in our view.

The full context of such a conclusion should be paraphrased as follows: Those 20 percent of companies covered by the standard who decide that they are dealing with hazardous materials may continue to use a current hazard communication program which can exclude trade secrets in a virtually unreviewable way. These companies will face little chance of being inspected, cited or fined.

Last, any worker trying to utilize this information must be willing to jeopardize his job.

Mr. GAYDOS. How about that (e) then? Could you kind of expand upon that? We all know we have got, I guess, not even 1,200 inspectors now. I don't know how many we have now; it has been so long since we have been cutting the budget and, you know, getting rid of—I don't even know what we have as far as inspectors, but you say any worker trying to utilize this information must be willing to jeopardize his job.

Can you just expand upon that just a little?

Mr. ORTLIEB. I am going to defer that question to our chief counsel.

Mr. GAYDOS. OK, Mr. Falletta.

Mr. FALLETTA. What we mean by that comment not only has to do with the lack of numbers of people in terms of enforcement—in fact, the testimony doesn't cite directly to OSHA's figures—but rather to recent NLRB figures which demonstrate that there is delay of up to now 450 days even for the Labor Board, which is staffed at a higher level, to deal with these concerns.

One comparison for the analogy is that even in the late 1970's, 1978, there was a backlog of some 1,300 cases of people who alleged that they had been discriminated against for safety purposes. The Department of Labor is the only agency that has the right to enforce that under the case of *Brighten* v. *Taylor* and they weren't

catching up with that very fast. That was even before the cutbacks with the Reagan administration.

Now manpower is a difficult problem. As critical is the status of a worker who cares to deal on his own: one who can't get an OSHA inspection. Under this standard an employer is relying on the material safety data sheet as the key communication factor, as Dr. Mallino pointed out in providing this information. A worker who wants to get the name of a substance cannot look at a label that is on a material, which he could do in an anonymous way. That worker is going to have to go to the company and say, "I want to look at the material safety data sheet. I want to get the data because all that is on the label is the code number, S410, and I want to know because the material safety data sheet is going to tell me what the name of the chemical is that I am dealing with so that I can talk to a health professional, be it a doctor or the union or a hygienist."

Once he steps forward and identifies himself, that person is marked. He is a troublemaker. He is a person who is no longer anonymous and the Department of Labor by definition, under this standard, requires that person to put a red flag over his head as a person who is a troublemaker.

Having done that, the company then has targeted the people which it could use or pinpoint in order to deal with in retaliation. Call them troublemakers; perhaps deal with them more directly in terms of dismissal. Were the standard, instead of as it is now, directed at the label as the primary means of communication, as many State and some city ordinances do, then that anonymity could be preserved. Thus, the idea that a "worker must be willing to jeopardize his job" grows directly out of the means utilized for providing the communication.

Mr. GAYDOS. Isn't there some way—I am just looking at it from a very practical aspect—couldn't there be some common source of the information where somebody could look at it in detail? I don't think it is practical to have all the necessary elements printed and attached to a drum.

Mr. FALLETTA. I agree and I think all the material on a material safety data sheet is critical, but it can be provided to a worker if he cares for it. I think the primary factor permitting a worker to act alone——

Mr. GAYDOS. You are taking the position that if a worker asked for the material, the data sheet——

Mr. FALLETTA. Right.

Mr. GAYDOS [continuing]. And he is looking at the safety—he wants to find out what the chemical—more specific nomenclature of the material he is dealing with—you say he is marked then?

Mr. FALLETTA. That is correct.

Mr. GAYDOS. Can't we make that same specific information available and have a common place of review, and still protect his anonymity?

Mr. FALLETTA. That would be possible only if there were a mechanism to get to that standard of review. Now, there is a good bit of literature available. There is a Registry of Toxic Effects of Chemicals that NIOSH puts out, but any research that is done, and any health professional will say that he can't get into that system. It is

a dictionary, so to speak. Unless the worker knows the name of the chemical that the person is working with—if it was the name as the primary function of the label, the name of the chemical, as well as perhaps specific risks such as cancer or being a reproductive hazard; if it was the name of the chemical and not everything that is on the material safety data sheet that were available on the label and available in an anonymous way, that worker could then go to the people who know how to get through the dictionary—the hygienist or the doctor—who could use the name and not the unique code name or number that the companies put on it, in order to find out what those effects are and wouldn't have to go back to the company in order to get it.

Mr. GAYDOS. In the past, many members of the committee voiced grave concern that, where you have effective bargaining representation or an agent in place, that will take care of things because they can fight as a group. They have technical people available and professional people.

But the grave concern is with those operations where there are no unions and even if the individual did by accident or otherwise come across the material data sheet—you know, all the information—he couldn't understand anyhow and he had no place to go to find out what it meant.

We were thinking as a group that there would be someplace available even to those individuals where you would have a reasonable interpretation as to what was on the sheet; and second, it could be made available in such a manner that you wouldn't incur the possibility, as you suggest, where a man would be then numbered as a troublemaker or a snoopy person and the one they should get rid of as soon as possible when the circumstances present themselves.

I don't know how we would approach that problem, but I guess the organized areas have just as much problem with that sheet as the unorganized.

Mr. FALLETTA. We file charges regularly trying to get people put back on the job. Not often specifically as the result of safety discrimination, but it is a regular part of my responsibility with the union. Even where there is a union, there is discrimination.

Mr. GAYDOS. How do you do it now since we don't have—we didn't have the standard all these years? How would you——

Mr. FALLETTA. How do we deal with discrimination?

Mr. GAYDOS. No, no, no. With the—didn't you have to resort to some kind of a general action, class action of some sort?

Mr. FALLETTA. No.

Mr. GAYDOS. You have no standard to enforce——

Mr. FALLETTA. No, we have used the more general duties or protections of the Labor Act, the National Labor Relations Act.

Mr. GAYDOS. OK.

Mr. ORTLIEB. The second portion of my remarks will address worker awareness of hazards, company efforts to inform workers and expectations for improvement.

As indicated in the introductory section, our membership covers a wide range of employers in the chemical industry. Their experience provides important insight into the effect of high-level decisions at the shop floor.

First, worker awareness. Our membership has recently given us the following information about worker awareness of hazards, which suggests that significant improvement is needed. When asked how informed our workers are about hazardous material handling, our membership indicated that fully 30 percent were either minimally informed or were totally uninformed. The practice regarding hazardous material labeling was similar: Thirty-three percent were never or were only sporadically found to be labeled. In just over 25 percent of the cases did workers consider that hazardous labels were always present.

In those locations where hazardous job handling procedures exist, they are not followed about 25 percent of the time. Almost half of the workers said that lack of training in the procedures was the reason for not following the procedure.

Further, 40 percent said that following the procedures would be inconsistent with demands of production. With respect to training provided them during 1983 and 1984 by our union, our membership indicated that of 1,200 training sessions attended dealing with health and safety, 100 involved first aid, 30 involved handling hazardous material and only one involved labeling and only four involved the "right to know."

Next, I will deal with company efforts to inform. The experience with regard to efforts by the company to inform people varies significantly. For example, fully 80 percent of our membership indicated that there are written job procedures which deal with the requirement such as personal protective equipment. Almost two-thirds said that written procedures also exist for handling hazardous chemicals.

Yet, while 95 percent indicated that the company had bulletin boards on the shop floor, over 50 percent said that the company used those boards for health and safety information only "sometimes" or "rarely."

The data above in training programs indicates that hazardous material labeling and right-to-know training occur far less often than such training as first aid.

Next, I will deal with expectations.

We tried to get a sense of what our members thought about the levels of concern over health and safety by various institutions and have the following results. When we asked our members what they thought about the levels of concern over health and safety by the company, 22 percent rated the company as being very concerned over health and safety. When we asked the same question of our members about the union's level of concern over health and safety, 62 percent rated the union—that is, the leadership—I am defining that as being local union leadership or our international headquarters leadership—as being very concerned over health and safety.

Finally, when we asked the same question of our members about what they thought about the level of concern over health and safety as it applied to their coworkers, that is, rank-and-file members, 24 percent answered that they felt their coworkers were very concerned over health and safety.

In summary, you can see that the ICWU membership has the most confidence in the union; second, in their coworkers; and third, in the company. Regarding the low percentage rating for cowork-

ers, I would explain that by saying that essentially is due to the factor of many workers still lacking in substantive training.

The worker's sense of a company's willingness to make improvements recommended by the union showed the following in a descending order, which is roughly in proportion to costs to the company. When the workers were asked about the company's willingness to make improvements recommended by the union in the area of personal protection or personal protective equipment, 56 percent of our members felt that the company was very willing to make improvements recommended by the union. Forty-nine percent felt that this was also true with posting signs and warnings. Thirty-four percent felt that the company was very willing to make improvements recommended by the union regarding work practices. But at the same time, as we just pointed out, these three areas, personal protection, posting signs/warnings, and work practices in our minds are relatively low-cost items which generally a company would be more willing to implement.

When our members were asked about the areas of industrial hygiene, education/training, and engineering controls—for example, in the area of industrial hygiene, 21 percent of our members surveyed felt that the company was very willing to essentially deal with recommendations made by the union in the area of industrial hygiene. Nineteen percent answered that the company was very willing to make improvements recommended by the union as it regards education and training, and finally, 17 percent for engineering controls.

So when you compare the low-cost items to the high-cost items, you see that the company is more willing to implement those low-cost types of improvements. But in our mind, the key kinds of things that need to be done in the workplace to deal with the problems of workplace health and safety are: First, industrial hygiene approaches to the problem; second, substantive worker education and training; and third, engineering controls.

As far as personal protective equipment is concerned, even though our members indicated that companies were very willing to make these kinds of improvements—if one could call that an improvement—we view personal protective equipment as a last-resort technique to dealing with occupational health exposures in the workplace, unless it is a temporary or an interim kind of situation.

Finally, when asked if the Government had a role to play regarding the worker's right to know, 87 percent strongly agreed. Less than one-half of 1 percent either disagreed or strongly disagreed.

In concluding the first two sections of my testimony, for the right to know to be effective, it is clear that a governmental role is critical. The workers have an appreciation for that fact. The current OSHA standard does not permit the Federal Government to play the critical part needed to assure that workers are informed about the hazards to be faced on their jobs.

Some States and cities have become aware that the necessary governmental input requires legislation at the local level. Where enacted, the cities appear to understand that it is not only a matter of worker health, as important as that component is. Local communities are also developing an awareness that emergency re-

sponse, acute and chronic health care and potential spills of hazardous materials raise issues of community health and safety.

From the record, it is apparent that the protection will be provided once it is identified. If States and localities are required to act, it is clear that they will do so. To the extent that OSHA is promoting a severely limited standard, it is OSHA which is the worst enemy of uniformity.

There will be protection; the protection will be based upon local concerns and local constituencies and the protection will vary, but we firmly believe there will be protection.

Mr. Chairman, now I would like to move into the third and final area of my remarks. I will now discuss the inadequacy of the OSHA Hazard Communication Standard and existing Federal legislation to deal with high-hazard substances such as I priorly mentioned—methyl isocyanate, the culprit in the Bhopal disaster.

In light of the recent Bhopal tragedy that caused the death of over 2,500 people and another 100,000 to seek medical care, it is clear that the United States must have the strongest Federal, State, and local right-to-know laws possible to provide workers and the public with knowledge about the hazards they face. Furthermore, neither the standard nor any other existing Federal legislation in our view is designed to prevent massive releases of high-hazard substances such as methyl isocyanate. Yet there are a host of high-hazard substances having similar hazard levels to MIC in this country today. Phosgene, chlorine, hydrogen chloride and cyanide are to name just a few.

ICWU believes that new and more stringent Federal regulations are needed to more responsibly regulate manufacturers, users, storers, transporters and disposers of high-hazard chemicals in the United States. Workplace and community disaster prevention should be an integral part of these standards.

Subsequent to the Bhopal disaster, a great debate has raged in the United States as to whether a Bhopal-like disaster could occur in the United States. In my mind, anyone who would deny the potential for a similar disaster in the United States doesn't read the daily newspaper or isn't listening to the news.

The warning signs and symptoms of a Bhopal-like disaster manifest themselves almost on a weekly basis in this country. The Bhopal disaster, as you know, is the worst industrial accident ever recorded in history and ICWU believes that the primary factors contributing to this catastrophe are also present in many chemical plants across this country.

In a late January copyrighted story, the New York Times published a lengthy article on the causes of the Bhopal disaster. The report was based, the Times said, on extensive interviews with both Indian workers and government investigators and is the first complete discussion of what happened at Bhopal. According to the newspaper, the major causes were poor training of workers and supervisors, poor upkeep of backup equipment, unreliable sensing gauges, staff cutbacks, and lack of adequate emergency plans.

Concerning staff cutbacks, the data on reduction in OSHA enforcement are set forth in earlier ICWU testimony. Regarding the lack of an adequate emergency plan, there is no current legislation or standard that requires an emergency plan.

At this time, the union knows of at least three ICWU local unions which use MIC in various processes very similar to those used in Bhopal. Mr. Chairman, I am going to be summarizing parts of this final section.

I would just like to briefly talk about our ICWU Local 832 in Woodbine, GA. As you probably know, this particular plant is owned and operated by the Union Carbide Corp. and uses MIC, methyl isocyanate, as an intermediate in its production process to produce the pesticide Temik. OSHA conducted an extensive inspection of this facility subsequent to the Bhopal tragedy.

One situation I would like to bring to your attention is that while this inspection was going on and subsequent to the inspection, the Health and Safety Department in Akron was in extensive communications with OSHA. There is a situation, Mr. Chairman, that I would like to bring to your attention at this time that I feel is great reason for concern regarding the OSHA region 4 emergency response system.

At one point in our dialog with OSHA, I attempted personally to reach the OSHA region 4 and Savannah area offices after the normal working hours. That is, normal working hours are between approximately the hours of 8:30 in the morning and 5 in the afternoon. I called, as I mentioned, the region 4 and the Savannah area offices responsible for conducting the inspections at Woodbine, GA, Union Carbide plant, between 5:30 and 6:30 at night, eastern standard time.

I nearly let the telephone ring off the hook. Neither office was reachable. The next day, when I talked with the Savannah office, I questioned them as to whether or not they had record-a-phones or some sort of specific emergency response system set up so that they could be reached in case of an emergency. I was told by the Savannah area office that at one time they did have a record-a-phone, but it was pulled out.

Upon further investigation, I learned it had been taken out about 1 year prior to that point in time. Upon further investigation, I also learned that—absolutely documented—that the region 4 office of OSHA does not have a record-a-phone. My question is: If, in fact, we do have a workplace disaster or a disaster in the community, what good will OSHA be to us if we can't get a hold of them in a short period of time?

Furthermore, I would ask—respectfully ask that the committee look into the question as to whether this situation is representative nationwide in this country. I know that under the Carter administration, there were a fair number of record-a-phones in the area and regional OSHA offices. It certainly isn't the case in the OSHA region 4 office and the Savannah area office. I wonder what the nationwide situation is now?

Mr. GAYDOS. If I may interrupt you at that point, I can tell you that your fears are well founded and that appears to be the situation nationally and what you are afraid of is a fact. We had a business representative before this committee right after the Bhopal, India, situation and he didn't tell the committee one thing about leaks that occurred in the Institute plant. We had to get the new business agent in, which we did later, and then he told us about the leaks that occurred sporadically, but regularly almost.

So I would have to say that based upon what information has been made available to this committee throughout the years—I am talking 10 years—that your fears are well founded. That is happening all over the country, and again we get the explanation, limited amount of inspectors, relatively new agency, and things like that. I keep arguing for budget increases, but everybody has been cutting us.

I wouldn't have any hesitation to suggest to you that you conclude that is what the situation is nationwide.

Mr. ORTLIEB. If we could respectfully suggest to the committee, Mr. Chairman, that OSHA, in conjunction with other appropriate agencies, establish a well publicized 24-hour nationwide toll-free number for reporting catastrophic events by workers, and the public.

As stated earlier, the ICWU believes there are many other chemicals——

Mr. GAYDOS. You are really serious about that suggestion?

Mr. ORTLIEB. Yes, I am, Mr. Chairman.

Mr. GAYDOS. How would it work?

Mr. ORTLIEB. Well, essentially——

Mr. GAYDOS. Remember, look at OSHA as it is right now. We can't even kick a standard out after 12 years. You want to put a hot line in throughout the whole Nation. I have got a chemical plant right next to me in operation. I have the anhydrous ammonia over there, biggest chemical plant in the world. You mean to tell me that plant, and a couple other small chemical packers over there that handle all the phenyls and all that stuff, that they are going to have a hot line down here to OSHA?

Mr. ORTLIEB. I am not saying the individual plant. I am just saying that there be established a nationwide hot line that would be well publicized so that workers, unions, the public, and companies would be aware of it. And if a major kind of disaster occurred, they would understand that there is a number you could call to immediately contact the appropriate Federal agencies.

If you would bear with me just a moment longer—for example, in the State of Ohio, the State of Ohio Occupational Safety and Health Consultation Program, a program set up for advising companies and management on how best to appropriate their health and safety resources in the workplace, does have, as I understand it, a statewide toll-free number that can be called.

Mr. GAYDOS. I know that it is an established practice in some areas and most times it originates with the local fire department or the fire marshal, which will require an operating institution or business to be on file with them and have a number to report in because the fireman coming to the scene of a fire doesn't know what is burning and you put out different fires with different types of approaches, some with water and some with chemicals, all those things. That is more in the area as I see it in my humble opinion.

What you are suggesting is that OSHA, directly or indirectly, get involved in a very complicated situation and I am one of the critics of OSHA because I don't think they are doing enough, but that is beside the point.

You are suggesting that we get into something that is impractical, in my view, because when the emergency occurs—and I have

to presume it is an explosion or a fire—that would be the only emergency I could comprehend at this time—you would want that hotline to extend that information down here to Washington or some other district office or someplace.

I think you are mixing up oranges and bananas. You are going to end up with nothing in the bag. I think you are in an area that seems to be incomprehensible as far as a practical solution.

We can't even get enough inspectors out in the field and you are bringing this up over here.

Mr. ORTLIEB. But with the old record-a-phone situation, anyone could call in to an area office, it would be recorded on the tape recorder; an inspector would be assigned to be on duty and even on call when he was at home. He would have the standard beeper system where he could call into the office and the recorder would play back the calls. Then it is up to the inspector's discretion to make a determination as to whether——

Mr. GAYDOS. I don't want to get argumentative with you here——

Mr. ORTLIEB. OK.

Mr. GAYDOS. Remember, we only have 1,200 inspectors. I want you to bear that in mind.

Mr. ORTLIEB. I understand.

Mr. GAYDOS. I don't know how you would do it.

Dr. MALLINO. Mr. Chairman, if I might——

Mr. GAYDOS. Yes, Dr. Mallino.

Dr. MALLINO. Mr. Florio has a bill that he introduced as a result of the Bhopal incident and as a result of a number of releases in his district and throughout the country.

Mr. GAYDOS. Those chemical fires up in New Jersey.

Dr. MALLINO. Chemical fires up there in New Jersey. Now, his basic bill is a community right to know bill, where all of the necessary information would, in fact, be housed in the local fire department so they know what they are dealing with when they respond to an emergency. It seems to us that this right-to-know issue, both the community right to know and in-plant occupational right to know, at some point has to be joined, particularly when we are dealing with these emergency situations.

It seems to me, as David, I guess, was trying to outline, is where you have a release inside the plant, and that, of course, is going to go outside the plant, that is an emergency, there ought to be some mechanism for immediately responding through the local fire department having the necessary information, but we ought to have the responsible Federal agencies on the scene as quickly as possible, as often occurs, as you well know, in the mine safety and health area, where you can have both Federal mine inspectors and State inspectors responding to a mine disaster almost immediately.

It seems that everything that we are beginning to hear as a result of numerous congressional hearings on this question of chemical releases and chemical fires throughout the country, we feel there is a need for some Federal legislation. I guess what we are saying is that this committee might look at joining that relationship somehow of ensuring that when you have an emergency situation and a response, that at least OSHA is there to provide

any assistance that it might be able to provide or knowledge that it might have with respect to the workers inside the plant.

Mr. GAYDOS. I just want to conclude by saying this: We are trying to get OSHA to do the most fundamental things, you know, and to thrust upon it another obligation which I know they can't handle, as sure as I am sitting right here they won't handle it, and they can't because of budget limitations and past practices and what have you; I would say it would be a little bit of a waste of our time.

You are talking about the ideal, and if that is the situation, I would agree with you 1,000 percent, Doctor, but I am looking at the practical aspect. We can't even get a standard. We waited 12, 14 years to get a standard that is not even in effect yet.

Dr. MALLINO. And it is not even a good standard.

Mr. GAYDOS. It is not even a good standard, as a lot of people say. Go ahead, I am sorry.

Mr. ORTLIEB. Mr. Chairman, I have taken up quite a bit of time already. I would be happy to go to the summary section of my third section if I am taking up too much time.

Mr. GAYDOS. Go ahead and summarize. It is unfortunate that I am going to be the only one asking questions, but I do, at this point, want to inform our witnesses that it is very essential to respond to the interrogatories of the minority.

Mr. ORTLIEB. I understand.

Mr. GAYDOS. I would allow the minority to question but I have been instructed that it would be an imposition of the witnesses if the minority counsel for the representatives asked the questions. I don't want to get into that aspect of it. I have acquiesced to my chairman and the conclusion is that if you will respond if you would to all of their interrogatories because it is essential that they have their questions answered, too.

But as far as them answering at arm's length right here, that is not allowed. I have been reprimanded for doing it because we would not get any members here. We don't get enough as it is and we are limited as far as the number on the committee.

So, with that admonition or explanation—I would much rather have it as an explanation—Mr. Ortlieb, you can conclude—summarize and then I am sure you will receive interrogatories or questions from the minority.

Mr. ORTLIEB. Okay. Very good.

What I just would like to lay out now is that we have documented three examples in our union essentially at local unions where there were mishaps where there could have been a significant number of lives lost, and point to the fact that we feel that a high-hazard standard is needed.

I would like to make the committee aware of an accident that occurred in Little Rock, AR, on New Year's Eve of 1984. Three thousand gallons of ethylene oxide escaped from a Union Carbide-owned railroad tank car parked in a switching yard. Officials reported evacuating between 2,500 and 3,000 residents from the neighborhood. As you probably know, EtO is a highly toxic and flammable chemical. According to the Little Rock Democrat, Jim Burnett, Chairman of the National Transportation Safety Board

rated the incident as one of the worst involving hazardous materials on an American railroad during 1984.

At this time, there has been a class action lawsuit filed against Missouri Pacific Railroad and Union Carbide on behalf of citizens and residents of Pulaski County, AR, all of whom were in the area which was contaminated by the release of gaseous ethylene oxide in the atmosphere. The size of the class is estimated to be at least 5,000 people.

I submit to you, Mr. Chairman, that the disaster could have been worse than it actually was. For that reason, ICWU believes that new Federal regulations must be passed into law which would require all manufacturers, users, storers, transporters, and disposers of high-hazard substances to develop plans to control and manage the release of high-hazard substances.

These plans should include design specifications, monitoring systems, warning systems, routine inspections and maintenance, back-up systems, training, emergency response measures, and evacuation plans for workers in the community.

Neither the OSHA Hazard Communication Standard or any other existing standards come close to affording workers and the community these protections.

Again, we would respectfully like to request your consideration, the committee's consideration of holding hearings in this important area.

Thank you very much.

[The prepared statement of David W. Ortlieb follows:]

PREPARED STATEMENT OF DAVID W. ORTLIEB, DIRECTOR, HEALTH AND SAFETY DEPARTMENT, INTERNATIONAL CHEMICAL WORKERS UNION

Testimony of the
International Chemical Workers Union

United States House of Representatives
Committee on Education and Labor
Subcommittee on Health and Safety

Good morning. My name is David Ortlieb. I am Director of Health and Safety for the International Chemical Workers Union. The International Chemical Workers Union is a labor organization which has just completed 40 years of representing workers in the chemical industry in North America. We are headquartered in Akron, Ohio. Our President is Frank D. Martino.

We currently represent about 60,000 workers in the U. S. Chemical Industry. We have contracts primarily on a plant-by-plant basis with major chemical producers such as Occidental, Monsanto, Dupont, American Cyanamid, Unilever and W. R. Grace. We also represent medium and small work forces in the chemical sector.

We appreciate the opportunity to address your Subcommittee on these timely and vital matters.

The comments this morning deal with two major topics:

1. Limits of the OSHA Hazard Communication Standard even if companies were at or near compliance; and

2. Our experience in the chemical industry demonstrating the lack of worker awareness of hazards and the inadequate efforts of companies to provide information.

3. Inadequacy of OSHA Hazard Communication Standard and existing Federal Legislation to deal with high hazard substances.

There will be some concluding remarks about expectations for improvement under the OSHA standard.

I. Limits of the OSHA Hazard Communication Standard Even if Companies Were at or Near Compliance

The OSHA Hazard Communication Standard (Auchter version) was published in the Federal Register on November 25, 1983, at Volume 48, page 53340-53348. The Standard is to become effective for employers on May 25, 1986. The delay for compliance was designed to allow companies time to understand and implement the programs to be required by this Standard.

The effective date is approaching and some companies are said to be "in compliance" with the Standard. Our data suggest that there is sufficient reason to question such an assertion. (See Section II, below.)

The primary focus of this portion of our comments will be that even if the assertion were true, it would not provide workers with significant protection. There are limitations in the Standard by its own terms which predetermine the limits of its impact.

There are five primary reasons that the OSHA Standard has limited effects:

- Scope of the Standard
- Company discretion
- Trade Secrets
- OSHA enforcement
- Retaliation for worker utilization

A - Scope of the Standard

The Standard only covers the manufacturing sector of the economy 1910.1200(b)(1). The coverage is limited despite the fact that testimony during the public hearings showed other sectors had a more serious health problem. Categories which are excluded from the Standard are farm workers, painters, auto repair shops, utilities, hospitals, aviation and transportation.

Even if companies were in "compliance," 80% of the work force would not be protected.

B - Company Discretion

Next, even where the Standard mandates some protection, it allows company discretion in two vital areas: 1) hazard determination and 2) continued use of existing communication programs.

The critical judgment that a specific chemical is to be considered a hazard is a judgment which rests with the manufacturer or importer 1910.1200(d)(1), and Appendix B. Language in Appendix B reads as follows:

> The hazard determination requirement of this Standard is performance-oriented. Chemical manufacturers....are not required to follow any specific methods for determining hazards, but they must be able to demonstrate that they have adequately ascertained the hazards of the chemicals produced....in accordance with the criteria set forth in this Appendix.

Thus, a company can decide if its chemical is a hazard, as long as it can "demonstrate" if called upon to do so, that its judgment is proper. The likelihood that such a demonstration will be required for a specific manufacturer, let alone a specific chemical, is minimal (see OSHA enforcement section of these

comments, below). Thus, the effective result is that the company decides what is a hazard.

The second major area left to a company's discretion is the nature of the company's hazard communication program. According to 1910.1200(e)(2) a company "may rely upon an existing hazard communication program to comply with these requirements...." if it meets the requirements of the Standard. Thus, the Standard accepts a "business as usual" approach unless there is a realistic concern over enforcement.

Effectively, companies can continue to communicate as they are now about hazards that they care to identify. It would be surprising to be able to find that companies were not "at or near compliance."

C - Trade Secrets

The limits of the Standard make the universe of communication even smaller by virtue of the "Trade Secrets" section. Even if a company concludes that a material is a hazard, it need not identify the material if the material is a "trade secret" 1910.1200(i). It is unclear that there is any mechanism for challenging such a designation, except in circumstances of denial to a "health professional" 1910.1200(i)(10).

It is simply a matter of conjecture at this point whether companies will use or abuse this section.

D - OSHA Enforcement

As noted above, the Standard is to be viewed as a performance standard. It depends significantly upon company discretion. The sole mechanism for reviewing the exercise of that discretion is the inspection and citation power of OSHA. Yet, the agency is staffed at a low level.

The Office of Technology Assessment has just released a 425-page report on Occupational Safety and Health entitled Preventing Illness and Injury in the Workplace. According to the Daily Labor Report, BNA, April 19, 1985, the Summary and Options chapter has the following findings:

- "The probability of a routine inspection is very low (there are about 160,000 inspections annually in a total of 4,600,000 workplaces.)" DLR 4/19/85, p.D-12

- "The typical manufacturing facility can expect to be inspected once every six years." Ibid.

Those inspections are also less likely to result in serious citations or fines:

- "The number and percentage of inspections with 'serious' and 'willful' violations has fallen. Ibid.

- "The total dollar amount of proposed penalties has been reduced substantially." Ibid.

It is not likely that addition of this new inspection task, with the duty of reviewing employer's discretion, will increase the chances of citation.

E - Retaliation for Workers' Utilization

Given the remote chances for an official inspection, a good deal of the responsibility for utilizing the Standard rests on the shoulders of the worker. Yet, this Standard, by design, excludes a meaningful worker role. A concerned worker cannot remain anonymous. As soon as the worker steps forward, retaliation becomes possible.

A worker should be able to get the identity of a chemical without subjecting himself to harassment. A meaningful and anonymous way to do that would be to get the name of the chemical off the label. The worker could then review any symptoms with a health professional to ascertain whether exposure at work was responsible.

Under the Standard, however, the label of a hazardous material may not have the identity of the chemical. Rather, it is the Material Safety Data Sheet or MSDS, which is the primary unit of conveying information. Thus, a chemical which is "identified" on a label can use a code or trade name or number, as long as it coincides with the identifier on the MSDS- 1910.1200, see definitions of "identity" and "common name."

The MSDS is conveniently in the possession of the company although it must be accessible on each shift 1910.1200(g)(9). A worker concerned about his risk must, therefore, identify himself to management in order to begin his independent fact-finding.

The potential for retaliation has a chilling effect on such efforts by workers. Even though the OSHA Act prohibits discrimination, the mechanism for policing retaliation is time consuming. By analogy, even under the National Labor Relations Act, retaliatory dismissals are occurring more often and are less likely to result in meaningful remedies. The references here are to "Oversight Hearings: Has Labor Law Failed," Joint Hearings, Washington, D.C., June 21, 25 and 26, 1984 (herein cited as Hearings).

- Over 5,000 complaints for retaliatory discharge were issued by the NLRB in 1979 (Hearings, p. 1000).

- The time for processing a charge to the point of decision had increased from 327 median days in 1974, to 484 days in 1980 (Ibid., p. 1002).

- The average penalty for lost wages plus interest was $11,000 (Ibid, p. 1002).

- Of those reinstated by the NLRB over 58% were not at the same job one year later (Ibid, p. 1000).

The data above make it clear that despite a statutory prohibition against discrimination, the workers are a long way from meaningful protection.

If a worker is required to face such effects in order to investigate a link between a chemical and his illness, the chances of worker utilization are minimal.

To summarize this section of my comments, then, companies may indeed be "at" or "near compliance" with the Standard. However, on these facts, "compliance" is a charade. The full context of such a conclusion should be paraphrased as follows:

(A) Those 20% of companies covered by the Standard...

(B) (1) Who decide that they are dealing with hazardous material....

(2) May continue to use a current hazard communication program....

(C) Which can exclude trade secrets in a virtually unreviewable way....

(D) Will face little chance of being inspected, cited or fined.

(E) Any worker trying to utilize this information must be willing to jeopardize his job!

II. Our Experience Demonstrates the Lack of Workers Awareness of Hazards, Inadequate Company Efforts and Little Expectation of Improvement Under the OSHA Standard

This portion of my remarks will address worker awareness of hazards, company efforts to inform workers and expectations for improvement. As indicated in the introductory section, our membership covers a wide range of employers in the chemical

industry. Their experience provides important insight into the effect of high level decisions at the shop floor.

A. Worker Awareness

Our membership has recently given us the following information about worker awareness of hazards which suggests that significant improvement is needed.

When asked how informed our workers are about hazardous material handling, our membership indicated that fully 30% were either minimally informed or were totally uninformed.

The practice regarding hazardous materials labeling was similar: 33% were never or were only sporadically found to be labeled. In just over 25% of the cases did workers consider that hazardous labels were always present.

In those locations where hazardous job handling procedures exist, they are not followed about 25% of the time. Almost half of the workers said that lack of training in the procedures was the reason for not following the procedure. Furthermore, 40% said that following the procedures would be inconsistent with the demands of production.

With respect to training provided them during 1983-1984, our membership indicated that of 1200 training sessions attended dealing with health and safety -

100 involved first aid
30 involved handling hazardous material
1 involved labeling
4 involved the "right to know"

B. Company Efforts to Info.m

The experience with regard to efforts by the company to inform people varies significantly.

For example, fully 80% of our membership indicated that there are written job procedures which deal with requirements such as personal protective equipment. Almost two-thirds said that written procedures also exist for handling hazardous chemicals.

Yet, while 95% indicated that the company had bulletin boards on the shop floor, over 50% said that the company used those boards for health and safety information only "sometimes" or "rarely."

The data above on training programs indicates that hazardous material labeling and right to know training occur far less often than such training as first aid.

C. Expectations

We tried to get a sense of what our members thought about levels of concern over health and safety by various institutions and have the following results:

	Very	Somewhat	Not Very
Company	22	48	22
Union	62	28	5
Co-Worker	24	56	17

The workers' sense of a company's willingness to make improvements recommended by the Union showed the following in a descending order which is roughly in proportion to costs to the company:

	Very Willing	Somewhat Willing	Not Very Willing
Personal Protection	56	39	3
Posting/Signs/Warnings	49	43	5
Work Practices	34	52	12
Personal Hygiene	29	55	13
Administrative Changes (rotation assignment)	23	54	17
Industrial Hygiene	21	52	22
Education/Training	19	57	21
Engineering Controls	17	58	21

Finally, when asked if the government had a role to play regarding a worker's "right to know," 87% strongly agreed. Less than one half of 1% either disagreed or strongly disagreed.

IN CONCLUSION, for the right-to-know to be effective, it is clear that a governmental role is critical. The workers have an appreciation for that fact.

The current OSHA standard does not permit the Federal Government to play the critical part needed to assure that workers are informed about the hazards to be faced on their jobs.

Some states and cities have become aware that the necessary governmental input requires legislation at the local level. Where enacted, the cities appear to understand that it is not only a matter of worker health, as important as that component is.

Local communities are also developing an awareness that emergency response, acute and chronic health care and potential spills of hazardous materials raise issues of community health and safety.

From the record, it is apparent that the protection will be provided once it is identified. If states and localities are required to act, it is clear that they will do so.

To the extent that OSHA is promoting a severely limited standard, it is OSHA which is the worst enemy of uniformity.

There will be protection. The protection will be based upon local concerns and local constituencies and the protection will vary.

But there will be protection.

III. Inadequacy of OSHA Hazard Communication Standard and Existing Federal Legislation to Deal with High Hazard Substances

In light of the recent Bhopal tragedy that caused the death of over 2,500 people and another 100,000 to seek medical care, it is clear that the U.S. must have the strongest federal, state, and local right to know laws possible, to provide workers and the public with knowledge about the hazards they face. Furthermore, neither the Standard or any other existing federal legislation is designed to prevent massive releases of high hazard substances such as methyl isocyanate (MIC). Yet there are a host of high hazard substances having similar hazard levels to MIC. Phosgene, chlorine and hydrogene chloride and cyanide are to name just a few. ICWU believes that new and more stringent federal regulations are needed to more responsibly regulate manufacturers, users, storers, transporters, and disposers of high hazard chemicals in the U.S. Workplace and community disaster prevention should be an integral part of these standards.

Subsequent to the Bhopal disaster, a great debate has raged in the U.S. as to whether a Bhopal-like disaster could occur in the U.S. Anyone who would deny the potential for a similar disaster in the U.S. doesn't read the daily newspaper or isn't listening to the news. The warning signs and symptoms of a Bhopal-like disaster manifest themselves almost on a weekly basis in this country.

The Bhopal disaster is the worst industrial accident ever recorded in history and ICWU believes that the primary factors contributing to this catastrophe are also present in many chemical plants across this country.

In a late January copy-righted story, the New York Times published a lengthy article on the causes of the Bhopal disaster. The report was based, the Times said, on extensive interviews with both Indian workers and government investigators and is the first complete discussion on what happened at Bhopal.

According to the newspaper, the major causes were:

- poor training of workers and supervisors
- poor upkeep of backup equipment
- unreliable sensing gauges
- staff cutbacks
- lack of an adequate emergency plan

Concerning staff cutbacks, the data on reduction in OSHA enforcement are set forth in earlier, ICWU testimony. Regarding the lack of an adequate emergency plan, there is no current legislation or standard that requires an emergency plan.

At this time the union knows of at least three ICWU local unions which use MIC in various processes very similar to those used in Bhopal.

ICWU Local 832

One of these plants is the Union Carbide plant in Woodbine, Georgia, represented by ICWU Local 832. The plant uses MIC as an intermediate to produce the pesticide Temik. OSHA conducted an extensive inspection of this facility subsequent to the Bhopal tragedy.

The ICWU health and Safety Department in Akron, Ohio, communicated extensively with OSHA regarding the inspection. The ICWU would like to apprise the Committee of what we believe to be a severely inadequate OSHA emergency response system in OSHA Region 4.

At one point in our continuing dialogue with OSHA Region 4 and OSHA Savannah Area Office concerning MIC related issues, the union attempted to reach these offices by telephoning shortly after the end of OSHA business day. Several calls were made to both the OSHA Region 4 and Savannah Area office between 5:30 - 6:30 p.m. EST, but the office was unreachable by telephone.

Upon investigation, ICWU learned that neither office has as much as a record-a-phone to serve as a mechanism to deal with catastrophic events occurring after OSHA 's normal business day. The question that ICWU raises is what if a Bhopal-like or mini-Bhopal disaster occurred in this part of the country after OSHA's normal business hours. OSHA could not be of much help if they could not be reached.

ICWU suggests that OSHA in conjunction with other appropriate agencies establish a well publicized 24 hour nationwide toll free number for reporting catastrophic events by workers and the public.

As stated earlier, the ICWU believes there are many other chemicals in everyday use in many plants in this nation including plants where ICWU represents workers which have the potential for causing similar tragedies.

ICWU Local 1007

For example, just last September at ICWU Local 1007 in Baltimore, Maryland, a vessel filled with off grade chemical products blew up spraying phosgene gas throughout the neighborhood. Phosgene is

handled routinely at the plant on a daily basis and is capable of causing death.

The vessel was located outside of the reactor building on top of a concrete pad. The vessel was propelled by the force of the explosion 3 to 4 feet into the ground and was completely destroyed. Pipe, conduit and other plant equipment in the immediate areas was heavily damaged. A cinder block structure adjacent to the vessel was completely destroyed. The brick facade of another building required extensive repair. The scene of the accident was a picture of twisted pipe, equipment and structural members lying in a large pile. The accident site appeared to be the victim of a direct bomb hit. Equipment debris was scattered over a relatively wide area. For instance, an oiler which weighs approximately 10 to 10 pounds was blown a couple of hundred yards from the site. The oiler went through the roof of an adjacent plant. After going through the roof of the plant, the oiler then went through the roof of a lift truck parked in the plant and was found under the lift truck.

Two workers were taken to the hospital, but were released after treatment. There were reports that the explosion noticeably shook buildings in the community. In all, 15 people from the community were treated at local hospitals for complaints of eye irritation, dizziness and shortness of breath. Ten of the treated individuals were at the Victory Elementary School No. 238, which is located less than a quarter of a mile from the plant. The 220 pupils of the school were evacuated.

Considering the force of the explosion and the area affected, it is truly miraculous that no one was seriously injured or killed.

There is no clear picture of the exact mechanism which created the conditions resulting in the explosion. Maryland OSHA (MOSHA) issued a citation against the company requiring temperature/pressure monitoring devices as a result of the explosion. This was the only citation issued by MOSHA.

An ICWU industrial hygienist who conducted an accident investigation at the facility found three factors which contributed to the explosion as being nearly identical to three out of the five major factors sited by the New York Times contributing the Bhopal disaster. The ICWU hygienist found poor training, poor upkeep and the absence of backup equipment, and unreliable sensing gauges.

About a year earlier, at another plant in the same Baltimore area, a disk blew out of a reactor which contained ethylene oxide (EtO). a chemical with a highly explosive nature. Following the incident, the contents of the reactor flowed to a holding tank and once there, the EtO mixed with air and water and exploded, destroying the tank and releasing the mixture into the air.

Luckily, no one was hurt in this incident, but it illustrates how a poorly designed system was not capable of controlling the release of hazardous chemicals.

ICWU Local 871

In July, 1983, at ICWU Local 871, Sauget, Illinois, the employer undertook the cleaning of a 12,000 gallon tank used to hold Sulfur Dichloride without proper consideration of the violence of the known chemical reaction between Sulfur Dichloride and water, and the great amount of heat generated. The employer directed that large quantities of water be run into a tank containing an estimated 200 gallons of Sulfur Dichloride. A violent and uncontrolled reaction took place, which caused gas and acid emission.

A cloud of hydrogen chloride and sulfur dioxide gas capable of causing chemical burns, blinding, edema, chemical pneumonia, asphyxiation and death spewed out of the plant and spread over the Rush City area of St. Louis sending 113 residents to the hospital.

Subsequent lawsuits were filed by residents claiming the company willfully and wantonly refused to notify persons who could be exposed to toxic substances.

The Belleville OSHA Area office inspected the facility and issued an OSHA General Duty Clause Citation in an attempt to abate the hazard, since no apparent existing OSHA citations were citable. These three examples are surely just the tip of the iceberg of hazardous industrial conditions that exist in our own country and which could lead to another Bhopal somewhere in the United States.

It is obvious to even the most casual observer that the agencies of the federal government do not have the resources needed to check all the plants and factories across the nation where high hazard substances and dangerous reactive chemicals are used.

Most exposures to high hazard chemicals occur in the workplace, but they are stored, transported and disposed of all around the would. Thus, the potential for accidental releases of high hazard chemicals can occur conceivably anywhere.

But to date, based on ICWU's research of existing federal regulations, the union has found no regulations which deal specifically with workplace and community disaster prevention as it concerns high hazard substances.

Concerning the transportation of high hazard chemicals in this nation, ICWU has found that existing DOT regulations specify only packaging (type of bulk container) and placarding requirements for certain poisonous liquids based on their potential for inhalation.

The DOT current system of hazard identification and classification is greatly inadequate in ICWU's belief, when one learns that MIC's (the chemical responsible for the Bhopal tragedy) primary hazard as classified by DOT is flammability, yet MIC caused widespread death in Bhopal due to its toxicity.

ICWU believes there is an urgent need to improve the manner in which toxic materials are classified and to raise the minimum levels of protection required by federal regulations in transporting high hazard substances.

Even more starting, although MIC is classified by DOT as a flammable liquid, just as gasoline, under existing federal regulations, MIC could be shipped by rail in the least protected DOT specified tank cars with no limits on the quantity per container.

Additionally, current federal regulations do not specify the routing of high hazard substances across this nation, to assure minimum exposure to the public during transportation. This means that chemicals such as chlorine, cyanide and phosgene can legally be transported in bulk quantities through virtually any major metropolitan area in the U.S.

Union Carbide Railway Tank Car Accident

Shortly after the Bhopal tragedy, on New Year's Eve of 1984, about 3,000 gallons of ethylene oxide (EtO) escaped from a Union Carbide owned railroad tank car packed in a switching yard in the center of North Little Rock, Arkansas. Officials reported evacuating between 2,500 and 3,000 residents from neighborhood homes.

EtO is a highly toxic and flammable chemical which is used in making rocket full and agricultural pesticides. EtO is also a potential carcinogen and mutagen.

According to a newspaper article in the Little Rock Democrat, Jim Burnett, Chairman of the National Transportation Safety Board rated the incident as one of the worst involving hazardous materials in an American railroad during 1984. Burnett also emphasized the need for railroads and the community to be jointly prepared for chemical accidents. Burnett said his agency had discovered a potentially disastrous delay between the time the leak was discovered and the North Little Rock Fire Department was notified.

It is important to note that Union Carbide has removed 26 other EtO tank cars from service, that do not have padding underneath their anti-shift devices, and which was the apparent cause of the leak.

It is ICWU 's understanding that a class action suit has been filed against the Missouri Pacific Railroad and Union Carbide in

behalf of citizens and residents of Pulaski County, Arkansas, all of whom were in the area which was contaminated by the release of the gaseous EtO in the atmosphere. The size of the class is estimated to be at least 5,000 people.

In concluding this section, ICWU believes that new federal regulations must be passed into law which would require all manufacturers, users, storers, transporters or disposers of high hazard substances to develop plans to control and manage the release of high hazard substances. These plans should include design specifications, monitoring systems, warning system, routine inspections and maintenance, backup systems, training, emergency response measures and evacuation plans for workers and the community.

Neither the OSHA Hazard Communications Standard or any other existing standards come close to affording workers and the community these protections.

Mr. GAYDOS. Mr. Falletta, do you have a statement?

Mr. FALLETTA. No, not really a statement. I think there were some questions earlier about education that I would like to make some very brief comments on.

Your question was: Is there training in education that any number of hygienists or employers can provide? Our own experience is that there are never enough professionals. There are never enough trainers. What we have been trying to do is train local union people, a "train-the-trainers" approach, to go back as rank-and-filers to be able to deal with it at the level that the people understand.

We think that that is critical—the people themselves need the information at their level and our union is trying to do that. Perhaps other agencies could do similar things.

Mr. GAYDOS. How successful have they been with it?

Mr. FALLETTA. I think the figures that were cited in our evidence demonstrate that there is a high level of concern—62 percent of the time—among the leadership and that is where we have focused our training to this point. The rank and file is about 22 to 24 percent. We understand there is going to be a lag and will continue to be a lag, but I think, as our training approach matures, we are going to find that the leadership is bringing back that message to the local and that that number will be increasing also.

Mr. GAYDOS. Some people have suggested—and hear me clearly—some people have suggested that there should be some type of a fine or mandatory aspect of rules and regulations, the old concept from years back being that if you don't put a fine on the worker, he is not going to respond to a lot of the rules and regulations. What do you think about that?

Mr. FALLETTA. Fining the worker? I think it may be a nice——

Mr. GAYDOS. If the circumstances indicate that.

Mr. FALLETTA. Let me outline our approach to fines, even with respect to employers. They are the people who ought to know better, who ought to have the information, ought to have the means to deal with it and who are making money off the product. Our position with respect to fines of employers is that that is of minimal effect. If they clean up their act, we will be happy with that. Not as a mechanism of making them act; if they would simply do what they are supposed to do, fines even for employers wouldn't be important.

I am not convinced that fines for workers would be essential. I think if you told a worker that if he is concerned enough about his own life or his family's, that he had the right not to work with the material unless he knew what it was, or unless he was trained with it, that that would be as effective a tool and you would find it utilized far more effectively than fines would be.

Mr. GAYDOS. When they have educational programs, are there written examinations at the conclusion of the program that the worker must pass or the agent or the representative must pass to show that at least the classes attended resulted in a general acquaintance in the general knowledge of what the subject matter was?

They test them anyhow? That is what I am trying to say.

Mr. FALLETTA. Sometimes they test them. We can't get teachers tested, you know, in terms of their adequacy——

Mr. GAYDOS. That is going to be a big battle, too.

Mr. FALLETTA. Let alone get the workers. I think the real test is the job and the work that is called for on the job. The worker's training and his lack of training is most evident in those emergencies. Not every worker understands in advance that there is the necessity to deal with the problem. Many of them react, as Mr. Marlow said, to their own individual medical symptoms.

If they have the ability to deal with the substance and to deal with professionals with real information—and that is the name of the chemical—I think that would go a long way toward resolving the problem. At the moment, they don't have that basic information and it is not likely under the hazard standard.

Mr. GAYDOS. You lived in the structure for a long time; you are in the legal department; all the complaints probably filter through you. You have been around a long time. What would be your honest and fair opinion at this time as to how the whole situation is developing?

Are we on the right track? Is it going to work, assuming that some of your desires are met, such as stronger aspects of the standard, or are we chasing the wild goose and are we all fouled up and nothing is working and it is so inadequate? What is your general opinion? Are we on the right track or not?

Mr. FALLETTA. I think the idea of training people and giving them information is clearly the right track. I think to call the Hazard Communication Standard of this administration an idealistic effort is not smart at all.

I think that is the wrong track. I think it is understood to be the wrong track, Mr. Gaydos.

Mr. GAYDOS. You mean voluntary compliance?

Mr. FALLETTA. Well, voluntary compliance of the employer himself defining what hazards he is dealing with, and that varies from place to place. I think it was clear. It is clear upon a reading of the standard that it is there in order to frustrate information and not in order to provide it. It is there in order to prevent States and communities from dealing with it effectively.

No, this standard is not the way to get the end that we are seeking to achieve. I have heard some workers say to the Department of Labor, "Thank you for a standard. We waited 12 years." And as Dr. Mallino said, we are still waiting. We don't have the Hazard Communication Standard.

Dr. MALLINO. Mr. Chairman, one of the—in this whole area, one of the areas we are getting into in a bigger way is the whole question of protecting workers who are going to go in to clean up toxic waste dumps. One of the most unique training programs I have ever heard of or seen is a training program that the operating engineers have put together on their own with the State of New Jersey, where they are bringing people in and training them on how to go into these—what, by definition, extremely hazardous situations—to deal with toxic waste dumps. They have a waiting list. They have a—it is almost a month-long training program where they have a class book—class training, as well as equipment training. These people are then certified by the union. Of course, Federal OSHA

has nothing comparable to it. We understand that there is a little OSHA pamphlet out; it is about four pages—the total scope of their program, but this is a training program where I understand from the operating engineers is they have people from all over the country wanting to get into the program because they are being asked to go into these situations with little or no understanding of what they are going into. It is a very successful program.

Mr. GAYDOS. We have had people on top of the coke batteries, as you well know, that still wear wooden shoes because the top of the battery is so hot that you can't stand on it unless you have a pair of wooden Dutch shoes about that thick. There was always a question of the chemical being thrown off from the batteries. Now, finally, they have respirators up there where they are breathing oxygen. For years, they used to stand on there with the wooden shoes and breath in all those chemicals.

Dr. MALLINO. Of course, with your help, Mr. Chairman, we also finally got an effective coke oven standard that hopefully reduced the emissions on the top of those coke ovens to at least manageable levels.

Mr. GAYDOS. If we wouldn't have, I probably would have been ridden out on a rail by the constituents. I live about a mile and a half from that plant.

Let me ask you one question. The issue of Federal preemption of State and local right-to-know laws is a thorny one. We have agreed to that. The present situation is that there are an awful lot of State standards floating around with regard to hazard communications. Would you again respond as to whether or not you think that is good or bad and how is it going to affect our Federal legislation?

Mr. FALLETTA. I think it is clear in the language of the Act that State plans that are as least as effective as the OSHA standard ought to remain in effect, that beyond that, they can be as stringent as is necessary and if they give less protection than the Federal standard, then they shouldn't be allowed.

There is a growing concern about whether local communities and their ordinances, being from Ohio, there are four communities now that have unique right-to-know legislation as well, both for the worker and the community. I don't see that that is expressly dealt with in the OSHA Act.

I believe the comments that we made, that the communities are aware that there is a problem. You can't evacuate 1,000 people in the middle of the night and not have the people aware that there is a problem that has to be dealt with. Problems such as that are magnified by every district in the country. If it is not going to be dealt with at the Federal level, it is going to be dealt with patchwork and piecemeal. There will be litigation about whether it is effective, but those people are going to have protection.

I think it is unfortunate. I think there was a real opportunity to provide a uniform and meaningful hazard communication and I think that opportunity was lost and it is to the detriment of the workers and the communities that it was.

Mr. GAYDOS. Dave.

Dr. MALLINO. Mr. Chairman, just to reiterate the AFL-CIO's position on that, we would prefer to have one single Federal effective standard. We don't have that and in lieu of that, we are encourag-

ing our affiliates throughout the country at the State and local level to try to get as effective State and local right-to-know protections as they can get.

Hopefully, as I said in my statement, Secretary Brock, amongst some other things that he has to do, will review this standard and direct that it be upgraded so that it fills in the deficiencies that we have outlined here today and I understand our brothers and sisters have done in previous hearings.

If we can get an effective Federal standard, then there would be no need for State and local right-to-know standards, but until we get that, we will encourage those people who have been doing a good job at the State and local level in coming up with what we consider to be more effective standards than the Federal Government is promulgating.

Mr. GAYDOS. I want to take this opportunity, Dr. Mallino, to express my sincere gratitude as far as your cooperation and your response to proposed legislation involving notification of hazardous material. I think that is an area where we should be able to work something out practically in these trying times with budget restraints and also with the fundamental differences as to whether or not we take legislation on the floor and how it is going to fare; whether the whole act would be amended, et cetera.

The way we are approaching, I think, is a proper approach and I want you to know that I appreciate the cooperation you have extended and you have done it in an impartial manner, I believe.

Dr. MALLINO. We appreciate your willingness to consider some of these issues, Mr. Chairman, and look forward to coming back on this and other issues.

Mr. GAYDOS. You gentlemen, I think, have made a good presentation. I would hope that my colleagues on the full committee would take time to review what you have had to say, especially your formal statements, which I think are most informative. Is there anything you want to add to the record at this time? Mr. Falletta or Mr. Ortlieb?

If not, let the record be quiet from here on in and thank you very much for your appearance here before the committee.

I understand we have Dr. Lamar Priester, Mr. Krocker, Mr. Johnson, and Mr. Greer.

Dr. Priester, thank you very much and welcome to the committee. We have your presentation, which, without objection, will be part of the formal record. Hopefully our colleagues on the subcommittee and the full committee will take advantage of what I know are well-studied remarks and professional positions. You may proceed in the manner that best fits your particular purposes, either summary or arm's length discussion back and forth. You name it and we will do it.

STATEMENT OF LAMAR PRIESTER, PHYSICIAN SPECIALIZING IN OCCUPATIONAL MEDICINE; CHARLIE KROCKER, FORMER EMPLOYEE, BLACKMAN UHLER CHEMICAL CO.; BOBBY JOHNSON, FORMER EMPLOYEE, BLACKMAN UHLER CHEMICAL CO.; AND GEORGE GREER, FORMER PINKERTON GUARD AT BLACKMAN UHLER CHEMICAL CO.

Mr. PRIESTER. Thank you, Chairman Gaydos. We are pleased to be here today to present some information which we hope will have some bearing on some of the items of interest which you all are considering.

We think it is very important to proceed with the worker right to know when he is exposed to toxic and hazardous substances.

Mr. GAYDOS. Let me ask you a question before you even go any further. If one of the standards specifically would set forth that there has to be a right to know, and if it were as detailed as a lot of people request it to be, do you think from a practical standpoint it would help the worker or do you think the terms are too technical? Do you also have fears of copyrights and trade secrets? Just give me a little general bird's-eye view. Are we barking up the wrong tree here in trying to make a lot of work and a lot of expense and then have workers and their representatives unable to take advantage of it? Do you have to be a professional, per se, or both sides of the fence?

How does this work in your professional opinion? Give me a general idea. Put me on the right track.

Mr. PRIESTER. Mr. Chairman, I think that generally we are on the right track. It is true that in many instances, a lot of this information is so highly technical that there is even some concern in the professional community understanding it, but in the absence of anything else, you know, you have to look at it from the standpoint of what do we have now and what the ultimate kind of system might be.

My feeling is that we have got to get started on at least some worker-training kind of programs. I think that as a minimum, workers need to be put through some training program designed for whatever area of the process that they are going to be involved in. Maybe not the whole plant process, but at least——

Mr. GAYDOS. What is wrong—if I may interrupt you——

Mr. PRIESTER. Sure.

Mr. GAYDOS. I apologize. What is wrong with the old words "caution," "danger," and the little old addition, "See your foreman"? Material data sheets—I agree there is a need for them, but how they are used, how they are available. You have heard the arguments, I think you were sitting here, where one suggestion was that all the data should be made in a big sheet and plastered on the drum because if it is back in an office somewhere and a guy goes back there—worker—and he says, "Hey, I want to look at that data sheet because my nose is itchy or I have been having a rash and I don't feel well; I am dizzy, I want to look at that data sheet," and he looks at it—I mean, I don't know what he is going to glean from that data sheet and I don't know if that is going to set up a situation whereby he is going to be known as a troublemaker. How do you approach this whole thing?

Mr. PRIESTER. In my experience, we feel that you can't expect a worker to understand—to fully understand highly technical kinds of information related both to the chemical nature of the material or the physiological effects. What we would like is that they need to be given general guidance that they are working with materials that have known health effects associated with them.

As a part of that, we feel like the companies ought to have some professional medical program on site or readily available to counsel with these employees as they develop symptomatology or if exposure records indicate that some followup kind of testing needs to be done.

Mr. GAYDOS. Are you familiar with the standard that is going to go into effect in November? Are you familiar at all with that standard?

Mr. PRIESTER. I must say I am not intimately familiar with that. Let me say I left doing administrative work on programmatic control about 3 or 4 years ago in this matter and am not intimately familiar with some of the more recent things that are coming along.

Mr. GAYDOS. Do you believe in—do you acquiesce or do you recommend material data sheets as one approach to the problem, that they should be made available and if so, who should they be made available to and how and under what circumstances?

Mr. PRIESTER. Material data sheets should be available and they should be available to those workers involved in handling that material in the process. Certainly those with supervisory responsibility over that process.

Mr. GAYDOS. You mentioned that you weren't familiar with the standard. Do you have any other approach or method that you would suggest that we use besides the data sheets? As a professional, medical professional, any other solution to the problem that we do have? Any other approach to it?

Mr. PRIESTER. As I say, in my experience, we have made recommendations on many instances to companies to place into their training program, employee training program, information. We think that they should post inspection reports from their OSHA-type inspections. They should have professional industrial hygiene consultation available to—not only to management, but to the worker so exposed.

Mr. GAYDOS. You heard me when I was asking some of the union representatives about this education and I had some doubts, really authentic doubts about education—not that I am anti-education, but I have some practical doubts about it.

Could you give me a practical example as to if I were repackaging chemicals and it came to my plant and I am an employee; I am a blue-collar worker and it came to my plant in a large barrel and my job was to repackage it in smaller 5-gallon cans or something like that and put a label on it and ship it out. How practical would a material data sheet be to me?

If I had access to it so we could make some kind of arrangements where we could go peek in without anybody knowing about it, and therefore, I wouldn't have an antagonistic situation set up between my employer and me, and I would go in there and peek and find out what is on there, what good would that do me? What would the

education program do? Is that a meaningful, viable approach to the problem, to tell a blue-collar worker that this chemical is some PCBs or something?

What good does it do? Is the education program supposed to be fabricated in such a way that I should be at extra knowledge as to how to protect myself in what to wear, what not to wear?

Mr. PRIESTER. Absolutely.

Mr. GAYDOS. Is that what we are talking about? Are we talking——

Mr. PRIESTER. Absolutely. I don't think that just a material data sheet to most of the workers which I have experience with is going to go far enough. It won't mean much to them. PCB doesn't mean a thing.

For example, let's talk about PCB. We had an incident which I was involved with down in my State where a tremendous amount of this material was dumped into an estuary and is still causing problems here 15 years later. The material data sheet on PCB was available to even upper management, but they had no—they didn't really know what it was, or that letting 1 percent get out into the environment was any problem.

As a matter of fact, they identified and did not relate that it was PCB. So it can't be just a material safety data sheet. There has got to be some additional information that this material is known or suspected to have certain types of health effects and when you are dealing with it, it is imperative that you wear the protective equipment and that you limit exposure in this way and that our process design is such that exposure is limited in this way so that they understand that it is important to limit exposure.

With toxic materials, Mr. Chairman, the way you keep it from having health effects is to limit exposure. Exposure can be limited in any number of ways. I think that the professional medical community has got the responsibility of trying to develop exposure levels upon which design and educational programs have got to be developed, to limit exposure.

Mr. GAYDOS. There are those that advocate strict liability upon the part of the manufacturer, that he should be strictly liable and that is the end of it. There is another school of thought that the employee should have all kinds of information available to him so he can protect himself. He can refuse to work if protective measures or protective clothing weren't available. What is your position on that?

Mr. PRIESTER. I think that an employee ought to have the right to refuse to work if he is not provided an adequate protective environment in which to work.

Mr. GAYDOS. You know, we had before the committee the kepone problem.

Mr. PRIESTER. I am intimately familiar with that.

Mr. GAYDOS. You are familiar with it, and the only procedure available was a periodic physical examination by a man of medicine—I imagine the plant doctor—and he would administer some agent, supposedly to remove the lead poisoning from the blood and that would be the extent of it. The employee would go back to work and come back again after he started feeling bad in six months and they would find——

Mr. PRIESTER. Another level.

Mr. GAYDOS [continuing]. And do it again. We would hope to circumvent that type of an accepted procedure and you are suggesting, then——

Mr. PRIESTER. I am a strong believer, Mr. Gaydos, that the most effective program is one in which the dose is limited. Prevention rather than acute continuous treatment of acute episodes involving exposure to these materials.

Mr. GAYDOS. OK. Do you want to proceed. Do you want to just talk generally?

Mr. PRIESTER. OK, sir, if you would.

First, let me—there are a few corrections in the record which I would like to make with respect to my training and experience.

I am a toxicologist, not a physician, and I specialize in occupational and environmental health hazards. I am a graduate of Clemson University, not that other university down in Columbia, SC.

Mr. GAYDOS. Did a computer make this statement [Laughter.]?

Mr. PRIESTER. No, sir, I dictated it.

Mr. GAYDOS. That is a pretty fundamental error, isn't it?

Mr. PRIESTER. I dictated it and somehow the secretary assumed that Clemson University and the University of South Carolina were the same.

Mr. GAYDOS. In World War II, they used to call them gremlins that did that stuff.

Mr. PRIESTER. Yes, I understand, and I am apologetic, but this is the way it came out of dictation so I need to——

Mr. GAYDOS. Can I call you doctor as a toxicologist?

Mr. PRIESTER. Yes, you might. My degree is a doctor of philosophy degree, Ph.D.

Mr. GAYDOS. We will get you a doctor one way or the other.

Mr. PRIESTER. Either way.

In 1969, I was appointed deputy commissioner of the South Carolina Environment Health and Safety Division of the Department of Health and Environmental Control. I served in that position until 1979 when I served as the commissioner of the department. In South Carolina, that department has jurisdiction over all environmental control programs, EPA, and we had an environmental health program that worked under OSHA, even though the principal agency in South Carolina was the South Carolina Department of Labor and we handled all the health-oriented aspects of the OSHA program under my jurisdiction.

In that year, I was—Governor James Edwards appointed me as the State energy officer—if you recall, we had some problems with energy supply and there was some feeling that I might be able to help us administratively through that crisis.

I left State government in 1981 and am now consulting in the area of toxic and hazardous waste.

We like the concept of Federal OSHA and we would like to dovetail into that program. Our concern at the time was that the Federal OSHA Program was not—at least in our judgment—was not quite up to the level that we were already going and so, as stringent as got lost in a lot of interpretive kind of things and we spent more time arguing that than getting my people in the field doing health inspections.

So we did have a time where we had some of that kind of discourse going. I am a State's-righter because I believe that that is—if you are going to be in a service-delivery mode and you are going to get out there and interface with the people affected, it is almost going to have to be implemented on a State level.

I do, however, understand the need for Federal overview and standardization in the industry. Otherwise, all kinds of economic disincentives begin to develop. We certainly understand that in my State and are willing to work with it and try to reach some level of implementation that is not going to start putting economic disincentives on.

Mr. GAYDOS. I want you to know that the committee is most appreciative of you and your colleagues appearing before the committee because sometimes we have difficulty in getting somebody interested in coming down to testify because they are too busy doing other things, so I want you to know that we most sincerely are thankful for your presence.

Mr. PRIESTER. We are pleased to be here.

I have with me today three gentlemen who I want you to hear from shortly. I have Mr. Charlie Krocker, who worked for 16 years with a chemical company in South Carolina called Blackman Uhler. I have Mr. Bobby Johnson, who worked at the same plant in Spartanburg from 1970 to 1974; and Mr. George Greer, who worked as a Pinkerton guard at that facility. All three of these gentlemen—as I say—worked for Blackman Uhler and this plant produced chemicals used in the manufacturing of dye materials.

Many of the materials they were exposed to at the plant have known health effects, not the least of which is Beta-naphthylamine, which is a known carcinogen and the Germans quit using it at the end of about 19—I guess it was quite a long time ago.

We met with a number of people from that plant operation over the last few weeks. I also have some knowledge of inspection reports and health assessments that some of my people did in a regulatory nature with Blackman Uhler spanning over the years from about mid-1960's and some of the recommendations which we made to them at that time about employee health-related kind of exposure patterns and pathways.

In our meetings with these employees, we find that there were no apparent efforts taken by the company to warn workers of the toxicity or carcinogenicity of the chemicals with which they were working. The company did not provide workers with adequate safety equipment or other on-the-job protective clothing.

Certainly they, in our judgment, did not provide adequate medical testing programs and screening in the light of knowledge of the kind of materials with which these workers were working. We had asked some current employees to come, but they, upon reflection, decided that they may have a problem with continued employment if they appeared, but I do have the three witnesses here today who are prior employees that we can talk about.

One thing I would like to——

Mr. GAYDOS. Can I interrupt you right there?

Mr. PRIESTER. Yes, sir.

Mr. GAYDOS. The three witnesses here, is your place of employment, of course, different than it was before because I notice the

termination date? What are you doing now generally? Are you out of the chemical business? Is that by design. Is it by circumstance?

Mr. KROCKER. Mr. Chairman.

Mr. GAYDOS. Yes.

Mr. KROCKER. I am Charlie Krocker. I was employed at Blackman Uhler from 1965 until 1981. No, it is not my privilege to be unemployed, but they laid me off and I can't stand the physical examination.

At that time, I asked for a doctor's appointment and they would not give me one, so I made an appointment myself to a urologist, Dr. Evans, and he gave me a prostate operation. He flushed my bladder.

I went back in 6 months to count cells. He requested a cystoscope and the plant said I didn't need a cystoscope. I was hired as a truckdriver and warehouse helper, and like you said a while ago, in dipping these materials, I have helped dip it in 5-gallon drums, take the label off it and put another one on it. I had no knowledge of what it was. No mask or nothing.

Mr. GAYDOS. I would say you are typical of what is occurring in the industry.

Mr. KROCKER. Yes.

Mr. GAYDOS. And still occurring today. Typical.

Did you ever make an inquiry as to what you were handling and was it by rumor that the stuff was poisoning?

Mr. KROCKER. It was by rumor by Dr.—I was talking to Dr. Williams, the head of the kidney transplant team in Charleston University in 1972, having breakfast, and he asked me where I worked and I told him. He said, "Well, do you know that is very dangerous?" I said, "No." He said, "Well, before it is over with, everyone in that plant will be cystoscoped." That is the first knowledge I had of it.

Mr. GAYDOS. Is there a union shop there?

Mr. KROCKER. No, sir.

Mr. GAYDOS. No union?

Mr. KROCKER. No, sir.

Mr. GAYDOS. Do you have legal counsel at this time?

Mr. KROCKER. Sir?

Mr. GAYDOS. Do you legal counsel on this problem?

Mr. KROCKER. Yes, sir.

Mr. GAYDOS. Let me ask you another question. Did you have great concern also that if you made a complaint or made an inquiry or asked about it that you might lose your job——

Mr. KROCKER. No, sir, because——

Mr. GAYDOS [continuing]. Or that you might be——

Mr. KROCKER [continuing]. I wasn't working at that time. I was laid off at that time in 1981.

Mr. GAYDOS. Did you have the fear you would be called a troublemaker and maybe not be able to get a job?

Mr. KROCKER. Troublemaker, I figured.

Mr. GAYDOS. Is that the general consensus—I mean, is that the opinion of a lot of your coworkers there, that you don't open your mouth because if you do, you are in trouble?

Mr. KROCKER. Mr. Chairman, being president of WE CARE Committee, which stands for Workers Exposed to Chemicals Awareness

of Risk Employment, and it is hard to get some of these fellows out. I think they are sort of scared to have a cystoscope or something, which I have asked two or three times for.

Mr. GAYDOS. It is the same situation as the fellows working down in the coal mines. They refused to take X-rays because they were afraid to be told that they had pnemoconiosis and if they were told they had pneumoconiosis, they would have to be taken off the workplace and they couldn't support their families. That was the catch-22 situation we were in. I guess the same thing prevails——

Mr. KROCKER. I think we are going through the same thing, Mr. Chairman.

Mr. GAYDOS. Same thing.

Mr. KROCKER. The workers that are employed now—they are scared to come forward; scared they will lose their job. I have told them at some of the meetings. I am satisfied some of them will lose their jobs, and since they started having these meetings about a month ago, they did elect a safety committee in each building.

Mr. GAYDOS. What does the safety committee do with this dangerous chemical? Do they——

Mr. KROCKER. I don't know to tell you the truth, but I have talked to some and they are supposed to tell you if it is dangerous or not.

Mr. GAYDOS. Are there fellow employees on that safety committee?

Mr. KROCKER. Fellow employees; yes, sir.

Mr. GAYDOS. Anybody from management on the safety committee? I guess there would be; yes.

Mr. KROCKER. I imagine so, and I am not positive about that, but I would say there are. But before this, we had no safety committee or nothing.

Mr. GAYDOS. Are you saying that you didn't get any protective equipment or devices as long as you worked there? Anything special——

Mr. KROCKER. No, sir.

Mr. GAYDOS [continuing]. Masks or protective clothing? Nothing like that?

Mr. KROCKER. No, sir. I have got safety shoes, two pairs of safety shoes a year and I broke my toe with those. A drum fell on it. That is a steel-capped shoe, which I guess you knew.

Mr. GAYDOS. How many employees worked in that plant?

Mr. KROCKER. I would say in the 1960's and 1970's, approximately 100 to 125 hourly employees.

Mr. GAYDOS. Is that plant still in operation today?

Mr. KROCKER. Yes, sir.

Mr. GAYDOS. Reduced force——

Mr. KROCKER. Yes.

Mr. GAYDOS [continuing]. Reduced employment.

Mr. KROCKER. Reduced employment.

Mr. GAYDOS. What was the specific product you were handling?

Mr. KROCKER. We made intermediate dyes, water-based dyes, oil-based dyes. We handled Beta-nathylamine, DCB, and phosphate dychloride, which I haul from other chemical companies to our plant, which is very explosive. I didn't know at that time. I went up and picked up 20 drums and dropped it about 6 inches on the

truck and the man came running out and said, "You are liable to blow us up." I said, "Well, I never knew that."

Mr. GAYDOS. Is that what he said?

Mr. KROCKER. Yes.

Mr. GAYDOS. You left there, I think, 1981, 1982?

Mr. KROCKER. I left in 1981.

Mr. GAYDOS. 1981. Before you left, did you ever see an inspector there, State or Federal inspector at your plant?

Mr. KROCKER. Yes, sir, I saw OSHA——

Mr. GAYDOS. Was OSHA there?

Mr. KROCKER [continuing]. Came in for inspection; yes, sir.

Mr. GAYDOS. How often, just roughly? Would you know?

Mr. KROCKER. I talked to him one time. I am not positive on the year, but he came and talked to me in the shipping department and asked me, he said, "Mr. Krocker, what would you think would help working conditions?" Well, at that time, we had no ventilation. We had three warehouses and had—the exhaust fan was broken and at times the building would get full of these powdered chemicals and acid fumes, and you couldn't walk through it without burning your nose and throat. He said, "What would help?" and I said, "Well, I believe ventilation."

It wasn't but 2 weeks later, they put in three exhaust fans.

Mr. GAYDOS. Would you say this is a typical situation in like plants that you have heard of?

Mr. KROCKER. Sir?

Mr. GAYDOS. Is your—do you think your plant is an exception or in the industry, is a small operation like that—is that usually what you have known to occur?

Mr. KROCKER. No, sir, I believe it is in every plant in Spartanburg County. I don't believe they have the adequate protection and the awareness.

Mr. GAYDOS. What kind of compensation, if any, do you receive now?

Mr. KROCKER. Social Security. Had to retire at 62.

Mr. GAYDOS. Is it a disability?

Mr. KROCKER. No, sir.

Mr. GAYDOS. It is just early retirement?

Mr. KROCKER. Early retirement.

Mr. GAYDOS. Anybody else want to make any statements?

Mr. Johnson.

Mr. KROCKER. This is Mr. Johnson.

Mr. JOHNSON. Mr. Chairman, I worked for Blackman Uhler from August 1970 to October 1974. At that time, I worked in production. My job was to assist in stenciling the drums the dye was packaged in.

Mr. GAYDOS. Same place. You worked with Mr. Krocker?

Mr. JOHNSON. No, sir; different building. Same place, different building.

My job consisted of mostly sampling the dye. I had a 12-inch pipette and my job was to sample it with my mouth; to draw up the dye through the pipette and put it in 1-ounce jar, bottles. At that time, I got dye in my mouth over and over time again. It was just a recurring thing, judging the pipette too much.

Mr. GAYDOS. You repackage it in 1-ounce packages, liquid.

Mr. JOHNSON. Yes, sir.

Mr. GAYDOS. You use the suction to get it started.

Mr. JOHNSON. Yes, sir.

Mr. KROCKER. Excuse me, sir. Mr. Chairman, if I could, those are sample bottles they take out of every drum. That is what he is speaking of. The sample bottles, the sample out of each drum that goes out. He had to take a 1-ounce sample out of every drum.

Mr. GAYDOS. Oh, I see, as a sample. And you would start the suction going to get it started.

Mr. JOHNSON. Yes, sir.

Mr. GAYDOS. Did you have any physical problems after that?

Mr. JOHNSON. No, sir. Not at the time. I got laid off in 1974. This past November or December, I went to my family physician in Spartanburg. He found out that I had blood in my—he said I had blood in my urine and he told me that it either came from my prostate gland or my bladder.

So, I called Mr. Foster at Blackman Uhler and asked him about it. I said, "What am I going to do about it, Ken?" He said, "Robert, I just don't believe it is related because your job has been just in this building where you worked at." I said, "Ken, I worked every building down there. I was a spare hand in a building I didn't work in, inventory." He said, "What do you want to do about it?" I said, "That is going to be up to your discretion." He says, "Well, I can run you for a screening or I can make you an appointment with my doctor in Spartanburg." I said, "Well, I would rather have that done if you don't care."

So he then—I went to his doctor in Spartanburg. He done the cystoscope and he found out I had gallstones. I had same-day surgery. That was January 14—16.

So, I was still burning; I was still bleeding, and I went back to the doctor. This went on about a month. So I went back to the doctor on February 6. The doctor put me back in the hospital, run another cystoscope and on the second one he run, he found out I had a growth in my bladder.

Mr. GAYDOS. Was it malignant?

Mr. JOHNSON. He never did say. I never did get an answer from him. I am still under the doctor's care and he never did say anything about it. So I stayed in the hospital 3 days. He sent me back home and I have been under his care ever since.

Mr. GAYDOS. How about you, Mr. Greer?

Mr. GREER. I worked for Pinkerton as a security guard down at Blackman Uhler for 10 years. That was from 1970 to 1980. I worked on a part-time basis because I was already 62 and I was drawing my Social Security, you know, with a 20-percent cut.

In 1977, I worked that Saturday—I mean, that Sunday. I worked on the weekends. Most of all my work was the weekend. Sometimes the plant was running; sometimes it wasn't. This day in June—I don't know what date it was; it must have been about the middle of June—I had an attack at home and went to bed.

About 10 or 11 p.m., I got to hurting so bad; nothing would ease me, you know, what I had, so I had to go to the emergency room, at Spartanburg Medical General. They gave me a shot and x-rayed me and told me to come back in the morning and see Dr. Brown.

I went on back home and it had eased then, you know, and I went to sleep. I slept about 2 or 3 hours and it started hurting again, a whole lot worse than it was to start with. So I had to go back to the emergency room. It was about 4 a.m. in the morning. That time they admitted me and they called Dr. Brown.

They made x rays and messed around for 17 days before I got out of there. He couldn't decide whether to take my bladder out or clean it out and give me cobalt. So that is what they did; they cleaned it out and gave me cobalt. I had to take about 25 or 30 treatments, the whole complete treatment. It left me—Dr. Joyce at the general hospital—he is over at cobalt—he told me, he said, "Now, this—you may not even think you are getting anything for the first 2 or 3 weeks, but you are getting it." It was some kind of light, you know, that they run across me here, down here in the lower abdomen.

That had decided it was—they went in with a cystoscope and took a specimen and decided it was cancerous, malignant. Then they messed around—I say, 7, 8 days anyway—making up a decision on what to do, whether to take the bladder out or clean it out. So they cleaned it out and they told me that "I got all I could out of it, but I couldn't get it all." He said, "You will have to take these cobalt treatments," and at first, I was taking them once every three months after I got out of the hospital. The first year, I took them once every 3 months; the second year, I was taking them once every 6 months; I was taking them once every 6 months for 2 years; and then they put it up to once a year and that is what I am on now.

I couldn't get a suit—go to Blackman Uhler about it, because I was hired by Pinkerton. Pinkerton, they didn't want to pay no attention to it. I went back to work for them and I worked up until they changed security companies. That has been about 4 years ago, and that is about it.

Mr. GAYDOS. Are you on retirement now?

Mr. GREER. No, sir, I am retired.

Mr. GAYDOS. You are retired?

Mr. GREER. Yes.

Mr. GAYDOS. Social Security?

Mr. GREER. Yes, sir.

Mr. KROCKER. Mr. Chairman. I would like to add one thing. I have been pressuring my committee all the time for better screening. I don't think we are getting the proper screening from the company and the reason I say that, I went to Dr. Evans and he gave me a urine test and found cells, cancer cells. I left his office—he gave me a slip—I left his office and went straight to Blackman Uhler, which is about a 30-minute drive, drank nothing, didn't stop. They gave me a urine test and it didn't come back for about 7 days and theirs came back negative.

I just don't believe we are getting the proper screening tests that we should have.

Another thing I would like to say, when they laid me off in 1981, I was the second oldest employee. I was taking blood pressure pills—140 over 90, it wasn't bad—but about a month or two before that, if you will recollect this Tylenol poisoning, I was sitting at breakfast one morning and I called the FBI in Columbia. We had

shipped 50 pounds of Tylenol additive to McNeil Pharmaceutical and they turned it down. For a month or so, it sat there and they finally shipped, which was gray with cynamic acid. I called the FBI and said, "I think you have got the wrong man." I said, "My fingerprints might be on that bottle." They said, "Well, if we need you, we will get in contact with you."

It wasn't but 2 or 3 months later, they laid me off. In 1981, there was a 6-month layoff. Then I got a slip saying, "permanantly laid off." Then they had to quit making this additive and had to close the building up. I understand now they have a doctor or a chemist in prison and this guy was in prison and they let him go. Johnson & Johnson at McNeil Pharmaceutical.

Mr. GAYDOS. Doctor, do you have any further——

Mr. PRIESTER. Let me take a few moments, Mr. Chairman, in kind of a wrap-up mode.

This experience with beta-nathylamine that these gentlemen are relating with possible kinds of health affects associated with exposure to it and the kinds of things that occurred. This occurs, as I am sure you are aware, with many different types of chemicals in the work places every day in this country.

One thing which I feel compelled to mention is that this kind of activity is somewhat exacerbated in recent years by perturbations in the marketplace associated with use limitations on certain kinds of chemicals and I am sure you are aware of that. It appears to me that that is a part of the problem that we are dealing with, so much so that many of the larger chemical companies that used to manufacture these products in well-managed facilities or facilities that had access to good professional health programs are now going out and contracting with smaller companies that just don't have that kind of background. It is purely market perturbation.

So, therefore, I feel like it is imperative that strong OSHA programs be developed to begin to interface with those medium-sized and small chemical companies to begin an implementation.

Those are the workers which I see that are most intimately at risk at this point and should be given some priority, in my judgment, in the implementation phase.

Mr. GAYDOS. Doctor, are you aware of the statistics as far as chemical workers are concerned? Am I accurately stating it that their statistics are lower? In the chemical industry, lower? How do you account for that?

Mr. PRIESTER. That was part of what I was trying to get at with my statement a moment ago, that because of the nature of this and because of the knowledge in there, there is demonstrated capability in the larger companies to deal with these problems. That was the point I was trying to make and yet, in some instances, the economics have driven production of some of these very hazardous chemicals into smaller operations where they don't have that kind of professionalism or economic potential to deal with it.

Mr. GAYDOS. I can understand that, yes.

Mr. GREER. One other thing I would like to say.

Mr. GAYDOS. Go ahead, Mr. Greer.

Mr. GREER. They expected the guard to make a round every hour; go through all the buildings and wind the keys, which I did.

Sometimes the plant was running and sometimes it wasn't. They run 7 days a week a long time.

Mr. Foster sent me a get-well card when I was in the hospital. Pinkerton didn't send me anything and they didn't take my job away from me, but I went back to work—I don't believe I should have went back to work because I could probably have drawed Worker's Compensation and I didn't. But after they closed it down—I mean, Pinkerton got out of it—they got plum out of Spartanburg. I don't think they got a job in Spartanburg anymore.

Mr. KROCKER. Mr. Chairman, if I could, I would like to say one thing.

Mr. GAYDOS. Sure.

Mr. KROCKER. Mr. Greer did have to wind keys in every building and this chemical is a very, very fine dust. I am satisfied that Mr. Greer was exposed to it and didn't know it.

Mr. GREER. That is right; they didn't tell—either Blackman Uhler or Pinkerton—tell me there was any danger in going through the plant. They didn't furnish me any protection. You know, goggles, masks or anything.

I think that they should have to do that from now on.

Mr. GAYDOS. As I mentioned earlier, the committee is limited in so far as, you know, you may have pending action and I am sure that you have sought out your proper legal advisor and hopefully it will work out for your benefit along those lines. I really do appreciate your coming here and putting on record facts and describing the situation which more than justifies and just happens to illustrate the importance of the position of the committee on the problem we have before us, and that is, proper notification to the employees, which is lacking today under the law.

Our pending legislation is going to be directed in that area.

I want to thank you, Doctor, for bringing these gentlemen down at their expense; bringing them down here and coming here and testifying and helping us. I want you to know we appreciate it. I hope that our positions are going to be much more defined, better defined because of your appearance.

Mr. PRIESTER. Thank you, Mr. Gaydos. You and the committee are to be commended for this effort, and if we can provide any additional information, please don't hestitate to let us know.

[The prepared statement of Lamar Priester follows:]

PREPARED STATEMENT OF DR. LAMAR PRIESTER

Mr. Chairman:

I appreciate your courtesy, Chairman Gaydos, in allowing us to testify on your proposed legislation which would establish the right of a worker to know when he is exposed to toxic or hazardous substances.

My name is Lamar Priester. I am a physician and I specialize in occupational medicine and environmental health hazards. I am a graduate of the University of South Carolina School of Medicine. In 1969 I was appointed the Deputy Commissioner of the South Carolina Environmental Health and Safety Division of the state Department of Health and Environment. I served in that position until 1979 when I was appointed Commissioner of the Department and then served in that capacity until my retirement in 1981.

I am currently a consultant in the field of hazardous waste exposure.

The testimony you will hear this morning will be in the form of a panel. My panel members are:

Mr. Charlie Krocker. Mr. Krocker worked for sixteen years at the Blackman Uhler Chemical Company in Spartanburg, South Carolina.

Mr. Bobby Johnson. Mr. Johnson worked at Blackman Uhler in Spartanburg from 1970 to

to 1974.

Mr. George Greer. Mr. Greer worked as a Pinkerton guard at Blackman Uhler from 1970 to 1980.

All three of these gentlemen worked at the same plant - Blackman Uhler Chemical Company - which is a division of Synalloy, Inc. The Spartanburg plant produced primarily chemicals used in manufacturing dyes for the textile industry. Many of the chemicals to which the workers at the plant were exposed are highly toxic, and several are known carcinogens.

There were no apparent efforts taken by the company to warn workers of the toxicity or carcinogenicity of the chemicals with which they were working. The company did not provide the workers with adequate safety equipment or other on-the-job protective clothing, nor did management provide the workers with adequate medical screening or health testing.

We had planned to include in this panel several witnesses who are currently employed at the plant. Upon reflection they decided not to come because they were afraid of losing their jobs if they testified in support of this legislation. Unfortunately, my state's laws do not provide the worker job security in such a situation and do not protect him or her from unfair firing practices. As a result these current workers decided they did not want to risk their jobs to testify here. However, they whole-heartedly endorse the comments and observations of the three witnesses who are appearing here today.

I would like to comment on one disturbing trend I have observed among chemical manufacturing companies.

A familiar tendency of many chemical companies is to cease production of a particular toxic chemical because of the occupational health problems associated with the manufacture and use of the chemical. They will then proceed to purchase that same chemical or its derivatives from smaller and more remotely-situated batch operations chemical companies.

An example of this is the chemical Beta-naphthylamine (BNA) which is an organic chemical and is used as a dye intermediate. Prior to 1955 this chemical was produced by DuPont and Allied Chemical. These companies then ceased production - I would assume because it was generally and widely known throughout the industry that BNA was a carcinogen which caused bladder cancer. After that date BNA was then produced by smaller companies.

A case in point is Kilsdonk Chemical Company located in Lock Haven, Pennsylvania. In 1961 Dr. Jan Lieben, the chief medical officer for the State of Pennsylvania, discovered that there was an inordinately high rate of occurrence of bladder cancer in Lock Haven and he traced this to the presence of BNA at the Kilsdonk plant. Later that year, afther legislative hearings were held, BNA was banned from production in Pennsylvania because of its serious toxic effects as a bladder carcinogen.

I might point out that the toxicity of BNA was not a new discovery. Some of the basic research dates from as far back as 1895. Germany, for example, the leader in the dye chemical industry, stopped production in 1941 and the United Kingdom

banned the production of BNA shortly thereafter in 1946. Thus, the link between bladder cancer and BNA was well-known long before BNA was banned in the United States.

Synalloy, the parent company of Blackman Uhler Chemical Company, produced BNA at its plant in Augusta, Georgia, until 1972. In 1972 with the passage of OSHA, BNA production ceased in the United States. BNA at that time was listed as one of thirteen carcinogens by the Occupational Safety and Health Agency. Synalloy had been shipping BNA to its subsidiary, Blackman Uhler, in Spartanburg for use as a dye intermediate up until the time it was banned in 1972.

The BNA saga demonstrates the difficulty of regulating the production and use of highly toxic and carcinogenic chemicals. When banned in one state the small batch operators in states with more relaxed standards begin manufacture of the same banned chemical. In some cases, for example, the case of benzidine, another carcinogen, when domestic manufacture is banned or restricted, companies begin importing the chemical from overseas instead, and continue to subject workers engaged in production to exposure to those chemicals. Often the workers are unaware of the hazardous properties of these chemicals.

In light of this type of pattern among chemical companies, it is even more necessary to have a strong federal Right to Know law in order to protect workers in the industry.

In order for you to understand more clearly the plight of the industrial worker exposed to toxic chemicals in the workplace, I would like you to hear from the members of our panel.

PREPARED STATEMENT OF CHARLIE KROCKER

I would like to take this opportunity to thank Representative Gaydos and the Subcommittee on Health and Safety for allowing me to express my support for the Right to Know Legislation.

I am here today on behalf of a citizens' action group called WE CARE which was founded to help make workers aware of the dangers and risks to their health caused by chemicals. I have first hand experience in knowing the importance of this type of legislation. I have worked for a plant where workers were not informed that the chemicals with which they worked on a daily basis could endanger their health and lives.

I worked at Blackman Uhler Chemical Company from 1965 to 1981. The company's plant is located in Spartanburg, South Carolina. The Spartanburg plant used chemical intermediates to manufacture dyes which were then used in the textile-dying industry. One of the chemicals used at the plant in dye synthesis and production was beta-naphthylamine, known also as BNA. As you may know exposure to BNA causes bladder cancer.

Blackman Uhler bought the BNA from a plant in Augusta, Georgia which was owned by Synalloy Corporation. The Augusta plant manufacture the BNA.

I worked in the Blackman Uhler plant as a truck driver and warehouse helper. I hauled beta-nathylamine from Augusta, Georgia, to the Spartanburg plant until 1978 or 1979. All this

time I was exposed to this chemical and did not know of its dangers.

In 1981 I was laid off from work on temporary notice. During that time I had some health problems and I asked for a doctor's appointment when I was laid off. I was told by the company that I would have to see my own doctor. I went to see Dr. Evans for a prostate operation and he flushed my bladder. I continued to see him at six-month intervals until 1983.

In 1983 my urine test showed abnormal cells. Dr. Evans sent the plant a notice that I needed a cystoscopy to check for cancer. The plant did not acknowledge his request. Almost two years later on March 7, 1985, I finally had a urine test done at the plant.

During this time I still had pain and I went to see another doctor on March 12, 1985. He treated me as an in-patient for kidney problems and put me on medication - Sulfadrug - for onw week.

Later in March I received the test results from my urine test and they were negative. I continue to have bladder problems, however. I cannot control urination and have frequent pain passing urine.

I was exposed to a number of chemicals at the plant which contained beta-nathylamine or other cancer-causing chemicals. The plant made and shipped ASSW Presscake, which uses BNA as a component. We also shipped DCB in drums to Harwick Chemical Company in Kentucky.

During all these years the plant never gave me a mask or other safety equipment to be used when handling the chemicals at the plant. They never told us that the chemicals we worked with caused cancer. There was a lack of warning labels on drums containing carcinogenic chemicals and there were no plant-wide safety programs which would help protect the workers.

I support the kind of legislation which will make chemical companies responsible for informing their workers of the dangers associated with hazardous chemicals. I only wish I would have known of the dangers of BNA when I was working with it and could have had protective safety equipment at that time.

Prepared Statement of Bobby Johnson

Bobby Johnson worked at Blackman Uhler 1970 to 1974. After ten years went to the doctor. Urine showed infection. Dr. Lace Cacke told to get another opinion from Mr. Foster. Mr. Foster made appointment with Dr. Graham. Treated for kidney or gall stones. Had to go back every 3 weeks. Put in hospital June 14, 1984. Returned February 6, 1985. Found growth in bladder. Cut hole in growth and flushed bladder. Ken Foster had not been in touch with me since. Still getting bills from Dr. Graham. No mask was furnished.

Prepared Statement of George Greer

George Greer worked for Pinkerton Guard at Blackman Uhler. Wind keys at every building. Worked from 1970 to 1980 at this plant. Bladder problem developed 1975 or 1976. Went to Dr. Jack Graham 1975 and was put in hospital for 17 days. Found tumor in bladder which was malignant. Treated every 3 months with Cobalt. Still have little control over kidneys and at times have excess bowl movement. No mask was provided.

Mr. JOHNSON. Mr. Chairman, I want to ask you something about this worker's compensation. I was out 8-9 weeks with this bladder trouble. During this 9 weeks, I got over a $2,500 hospital bill and doctor bills. I asked Mr. Foster how we were going to pay these bills; he told me to turn in my city insurance. He told me the insurance issued with my city insurance.

I don't believe the city should pay for something like this that has happened, I don't believe the city should carry the burden on this.

Mr. GAYDOS. I don't want to get into your Worker's Comp statute, you know, as to who pays for medical and, you know, expenses incurred as a result of your employment. That would not be within my proper prerogative. You just ask around. You will find--there will be someone to pick up that tab, whether it is Workman's Comp or—I don't want to comment on that.

Mr. JOHNSON. Thank you, Mr. Chairman.

Mr. GAYDOS. I am not allowed to.

Thank you very much and thank you for your appearance, and again, thanks for being great Americans in appearing before the committee.

[Whereupon, at 12:10 p.m., the subcommittee was adjourned, to reconvene subject to the call of the Chair.]

APPENDIXES

MAJORITY MEMBERS
AUGUSTUS F. HAWKINS, CALIFORNIA
CHAIRMAN
WILLIAM D. FORD, MICHIGAN
JOSEPH M. GAYDOS, PENNSYLVANIA
WILLIAM (BILL) CLAY, MISSOURI
MARIO BIAGGI, NEW YORK
AUSTIN J. MURPHY, PENNSYLVANIA
DALE E. KILDEE, MICHIGAN
PAT WILLIAMS, MONTANA
MATTHEW G. MARTINEZ, CALIFORNIA
MAJOR R. OWENS, NEW YORK
FREDERICK C. BOUCHER, VIRGINIA
CHARLES A. HAYES, ILLINOIS
CARL C. PERKINS, KENTUCKY
TERRY L. BRUCE, ILLINOIS
STEPHEN J. SOLARZ, NEW YORK
MERVYN M. DYMALLY, CALIFORNIA
DENNIS E. ECKART, OHIO
TIMOTHY J. PENNY, MINNESOTA
CHESTER G. ATKINS, MASSACHUSETTS

MINORITY MEMBERS
JAMES M. JEFFORDS, VERMONT
WILLIAM F. GOODLING, PENNSYLVANIA
E. THOMAS COLEMAN, MISSOURI
THOMAS E. PETRI, WISCONSIN
MARGE ROUKEMA, NEW JERSEY
STEVE GUNDERSON, WISCONSIN
STEVE BARTLETT, TEXAS
ROD CHANDLER, WASHINGTON
THOMAS J. TAUKE, IOWA
JOHN R. MCKERNAN, JR., MAINE
RICHARD K. ARMEY, TEXAS
HARRIS W. FAWELL, ILLINOIS
PAUL B. HENRY, MICHIGAN

TELEPHONES
MAJORITY—(202) 225-4527
MINORITY—(202) 225-3725

COMMITTEE ON EDUCATION AND LABOR
U.S. HOUSE OF REPRESENTATIVES
2181 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515

May 28, 1985

The Honorable Joseph M. Gaydos
Chairman
Subcommittee on Health and Safety
Committee on Education and Labor
2186 Rayburn House Office Building
Washington, D. C. 20515

Dear Joe:

Attached is a written statement by Mr. W. D. Holland, Chairman of Svnalloy Corporation. Svnalloy Corporation was a topic of discussion at our May 1 hearing.

I would appreciate it if Mr. Holland's statement could be made part of the hearing record when it is printed.

With best wishes, I am

Sincerely yours,

Rod Chandler
Member of Congress

cc: W.D. Holland
Chairman and CEO

STATEMENT OF W. D. HOLLAND, CHAIRMAN
SYNALLOY CORPORATION
BEFORE THE HEALTH AND SAFETY SUBCOMMITTEE
OF THE EDUCATION AND LABOR COMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES
MAY 17, 1985

My name is W. D. Holland. I am Chairman of Synalloy Corporation. I am responding to the May 1, 1985 testimony of Dr. Lamar Priester and three former employees of Synalloy's Blackman-Uhler plant in Spartanburg, South Carolina.

Dr. Priester contended that three employees, Charlie Crocker, Bobby Johnson and George Greer, were exposed to the chemical Beta-Napthylamine (BNA) while employed at the Spartanburg plant, which produced chemicals used in manufacturing dyes for the textile industry. Dr. Priester stated that "there were no apparent efforts taken by the Company to warn workers of the toxicity or carcinogenicity of the chemicals with which they were working." Dr Priester also stated that "the Company did not provide the workers with adequate safety equipment or other on-the-job protective clothing, nor did management provide the workers with adequate medical screening or health testing." Finally, Dr. Priester contended that BNA has been banned in the United States because of its alleged link with bladder cancer.

Contrary to Dr. Priester's statement, the manufacture of BNA

has not been banned in the United States. Synalloy ceased its use in 1972, when NIOSH, in a joint report with the South Carolina State Board of Health, after a period of study ranging over a year, informed us that:

> "Environmental Recommendations and Conclusions:
>
> The extent of the hazard associated with the production and use of B-Naphthylamine will depend on medical and epidemiological findings. If the manufacture and use of B-Naphthylamine is to continue, it is strongly recommended that the plant utilize the totally enclosed method described herein (the present process is not totally enclosed). This involves the manufacture of the intermediate and use of the material to make the final product at one plant site only as described in this report. The Company should change its present method of handling B-Naphthylamine, or if epidemiological and medical survey data so indicate, the use of B-Naphthylamine could be a candidate for environmental obsolescence."

Thus in 1972, NIOSH and the State Board of Health were not sure of the extent of the hazard and expected future epidemiological studies to dictate the Company's course of action. In fact, Dr. Priester, who was the Deputy Commissioner of the South Carolina Environmental Health and Safety Division of

the State Department of Health and Environment from 1969 to 1979, never visited the Spartanburg plant or warned us of the severity of the link between cancer and BNA that he now says, with perfect hindsight, "was well known" before 1972.

Synalloy shut down BNA use and manufacture in 1972. It was solely our decision. Synalloy did not know of any bladder problems at either of its chemical plants as of 1972.

When Synalloy Corporation was inspected by NIOSH in 1972, every employee who was exposed to BNA was informed of the hazard and signed a statement recognizing this. Messrs. Crocker and Greer, who testified before this committee, were not informed individually because they were not exposed. Mr. Crocker was a warehouseman and Mr. Greer was a Pinkerton guard. Their duties did not bring either of them in contact with BNA. They also contended that protective safety gear was not provided. This is not true. Safety equipment has been supplied in the plant for many years. This includes protective clothing, goggles, masks, rubber boots and rubber gloves. Workers were required to take a shower and change into street clothing at the end of their shift.

Moreover, since 1972, every employee in the plants of the Chemical Division has had a PAP test annually for bladder cancer. The PAP readings are made at Spartanburg General Hospital. This is the standard form of screening. If anything abnormal is found, the person is sent to a leading urologist for further

tests. After fourteen years of testing, nineteen years after first exposure, none of the exposed group at Spartanburg has been found to have bladder cancer.

Mr. Crocker testified that he worked as a truck driver and warehouse helper and hauled BNA from Augusta, Georgia to the Spartanburg plant until 1978 or 1979. This is also not true since no BNA was used after 1972. In his own testimony, Mr. Crocker explained that he has experienced cystitis and prostatitis, but all PAP tests for bladder cancer have been negative. Mr. Crocker's most recent PAP test was in March, 1985.

Mr. Crocker also implied he was discharged because he told the FBI that Blackman-Uhler had shipped off-grade raw materials to Johnson & Johnson for use in Tylenol manufacture. This was at the time of the Tylenol poisoning cases. Blackman-Uhler never made any products for use in Tylenol and did not know Mr. Crocker had told the FBI we did. This ludicrous incident is just one indication of what a modern company has to bear in today's regulatory climate.

Mr. Johnson stated that he was obliged to sample finished dye stuff from shipping drums through a pipette by mouth, frequently getting a mouthful of dye stuff. The pipette in question was equipped with a rubber bulb for producing the suction. It is just inconceivable that any person would use his mouth for this purpose.

Synalloy has always acted responsibly in the matter of employee notification and employee health screening. Prior to 1972, Synalloy's plant in Augusta, Georgia had twice been inspected by the Georgia Department of Public Health. As a result, the inspector wrote the manager of the plant that it was being operated under safe conditions. As a matter of policy, we inform our workers of all known hazards involved in handling and using the chemicals they work with. It is our belief that the question is not whether a given chemical can cause harm. many of them can, but whether the manner in which they are being handled is safe. We believe that BNA was handled safely at Spartanburg and exposure was minimal as demonstrated by the lack of disease upon the people who work with the material.

OSHA OVERSIGHT—WORKER HEALTH AND SAFETY IN THE MANUFACTURE AND USE OF TOXIC AND HAZARDOUS SUBSTANCES

WEDNESDAY, MAY 8, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON HEALTH AND SAFETY,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2261, Rayburn House Office Building, Hon. Joseph M. Gaydos (chairman of the subcommittee) presiding.

Present: Representatives Gaydos, Hayes, and Chandler.

Staff present: Subcommittee on Health and Safety: Sy Holzman, deputy staff director; and Lee Bassford, staff assistant; Committee on Education and Labor: Dorothy Strunk, minority senior legislative associate; and Peter Morgret, minority legislative associate.

Mr. GAYDOS. The committee will be in order.

Today's hearing is the final one in this series examining OSHA's hazard communications standard and its prospects for encouraging worker health and safety for those involved in various ways with hazardous and toxic materials.

The basic purpose of the standard is to inform workers about the substances to which they are being exposed; further, to tell them what potential dangers exist, if any; to explain what safety procedures are necessary for their fullest possible protection; and to train workers in safety measures when dealing with these substances.

In previous hearings, we heard from labor representatives who expressed their concerns about the material safety data sheets and the amount and quality of information presented thereon; the trade secrets provision of the standard; and, further, the ways some information is being withheld from workers; and, finally, the efficacy of employer-developed training programs.

Today we intend to hear from the other side—the employers. Witnesses include representatives of the Chemical Manufacturers Association and the National Association of Manufacturers.

Without objection, my opening statement will be made part of the record at this point.

[The opening statement of Hon. Joseph M. Gaydos follows:]

OPENING STATEMENT

HON. JOSEPH M. GAYDOS, CHAIRMAN

SUBCOMMITTEE ON HEALTH AND SAFETY

MAY 8, 1985

TODAY'S SESSION OF THE SUBCOMMITTEE ON HEALTH AND SAFETY IS THE FINAL ONE IN THIS SERIES EXAMINING OSHA'S HAZARD COMMUNICATION STANDARD AND ITS PROSPECTS FOR ENCOURAGING WORKER HEALTH AND SAFETY FOR THOSE INVOLVED IN THE MANUFACTURE, DISTRIBUTION AND USE OF HAZARDOUS AND TOXIC MATERIALS.

ALL OF US KNOW THAT WE RISK OUR LIVES EVERY DAY, BUT MANY OF THOSE RISKS CANNOT BE PREPARED FOR. WE NEVER KNOW WHEN, WHILE DRIVING A CAR, WE COULD BECOME INVOLVED IN A FATAL ACCIDENT, FOR EXAMPLE.

MEN AND WOMEN WHO WORK IN AND AROUND TOXIC MATERIALS ALSO FACE LIFE-THREATENING SITUATIONS. THE DIFFERENCE IS THAT IF THEY ARE AWARE OF THE HAZARDS TO WHICH THEY ARE EXPOSED AND KNOW WHAT PROTECTIVE MEASURES THEY CAN TAKE, THEIR CHANCES OF DANGER ARE LESSENED.

THAT, PURELY AND SIMPLY, IS THE PURPOSE OF THE HAZARD COMMUNICATION STANDARD: TO INFORM WORKERS ABOUT THE SUBSTANCES TO WHICH THEY ARE BEING EXPOSED, TO TELL THEM WHAT DANGERS EXIST, TO CLEARLY STATE WHAT PROTECTIVE MEASURES ARE NECESSARY, AND TO TRAIN AND EDUCATE WORKERS IN HOW TO DEAL WITH THESE SUBSTANCES.

THROUGHOUT THE PREVIOUS HEARINGS AT WHICH REPRESENTATIVES FROM ORGANIZED LABOR TESTIFIED, IT HAS BECOME EVIDENT THAT

THE STANDARD MAY NEED ADDITIONAL ADJUSTMENT. THE RECOMMENDATIONS HAVE BEEN VERY SIMILAR FROM ALL LABOR GROUPS -- APPLICATION OF THE STANDARD TO OTHER INDUSTRIES, REVIEW OF THE TRADE SECRETS PROVISION, AND A BETTER SYSTEM OF TRAINING.

THE LABOR REPRESENTATIVES HAVE DISAGREED ON TWO FACTORS. FIRST, WHETHER THE STANDARD SHOULD GO INTO EFFECT AND THEN BE FINE-TUNED OR WHETHER IT SHOULD BE WITHDRAWN UNTIL IT IS PERFECTED,

AND, SECOND, WHETHER THE FEDERAL STANDARD SHOULD PREEMPT STRONGER STATE STANDARDS EVEN THOUGH THE STATE IN QUESTION IS NOT OPERATING UNDER AN APPROVED STATE PLAN.

AS TO THE SECOND ISSUE, THE COURTS ARE EVEN NOW DECIDING THAT QUESTION. INSOFAR AS THE FIRST, I BELIEVE IT IS

IMPORTANT THAT A STANDARD BE IN PLACE. WE HAVE WAITED FAR TOO LONG FOR A STANDARD, REGARDLESS OF WHETHER IT IS PERFECT OR NOT, TO START REPLAYING THE RECORD. MY FEAR IS THAT IN FORCING A WITHDRAWAL OF THIS STANDARD, GIVEN THIS ADMINISTRATION'S ATTITUDE TOWARD OCCUPATIONAL SAFETY AND HEALTH, THAT NONE WOULD BE PUT IN ITS PLACE.

TODAY'S WITNESSES REPRESENT THE OTHER SIDE OF THE COIN -- MANUFACTURERS AND USERS OF CHEMICALS. I LOOK FORWARD TO HEARING THE VIEWS OF THE CHEMICAL MANUFACTURERS ASSOCIATION AND THE NATIONAL ASSOCIATION OF MANUFACTURERS ON THE HAZARD COMMUNICATION STANDARD.

I FEEL SURE THERE WILL BE AREAS ON WHICH THEY WILL AGREE WITH LABOR REPRESENTATIVES AS WELL AS AREAS OF DISAGREEMENT.

A THIRD INVITED GROUP, THE CHEMICAL SPECIALTY MANUFACTURERS ASSOCIATION, IN A RESPONSE FROM ITS PRESIDENT, IS UNABLE TO SEND A REPRESENTATIVE AND WILL CONSIDER SUBMITTING A STATEMENT AT A LATER DATE.

CSMA'S POSITION ON A NUMBER OF THE ISSUES INVOLVED IS ALREADY ON RECORD, MOST RECENTLY STATED BY LETTER FOR INCLUSION IN THE RECORD OF HEARINGS HELD DURING THE 98TH CONGRESS.

Mr. GAYDOS. So, on behalf of the committee and for the record, it's my pleasure to welcome Bruce Karrh, the vice president of safety, health and environmental affairs for Du Pont; and Mr. Evans, director of environmental health for the Monsanto Co.

Without objection at this point, your statements, as presented, will be made part of the record.

You may proceed in the manner that best suits your purposes.

STATEMENT OF BRUCE W. KARRH, M.D., VICE PRESIDENT OF SAFETY, HEALTH, AND ENVIRONMENTAL AFFAIRS, E.I. DU PONT DE NEMOURS & CO., ON BEHALF OF THE CHEMICAL MANUFACTURERS ASSOCIATION; AND THOMAS F. EVANS, DIRECTOR, ENVIRONMENTAL HEALTH, MONSANTO CO., ON BEHALF OF THE CHEMICAL MANUFACTURERS ASSOCIATION

Dr. KARRH. Thank you very much, Mr. Chairman.

I am Bruce W. Karrh of E.I. du Pont de Nemours & Co., vice president with responsibility for safety, health, and environmental affairs.

Accompanying me today is Mr. Thomas Evans, director of environmental health for the Monsanto Co., both of us representing the Chemical Manufacturers Association.

In my capacity with Du Pont, I'm responsible for the safety and occupational health programs within the company, and I also serve as chairman of the health and safety committee of the Chemical Manufacturers Association, or CMA.

We appreciate the opportunity to appear before your subcommittee this morning and speak on behalf of CMA.

I'd like to address some new initiatives which have recently been undertaken by the chemical industry to promote enhanced public awareness of the industry's safety and emergency response operations and improved coordination between industry and community emergency response activities.

I'd also like to briefly describe some product management practices employed by Du Pont to control the risks associated with the production, use, and handling of our products.

In the wake of the tragedy at Bhopal, the chemical industry conducted a self-inspection of its operations and safety practices. From this review, it was recognized that there existed a need to improve the coordination of industry emergency response capabilities with those of the community.

In an effort to address this need, the industry has developed two programs designed to expand industry's involvement in emergency planning, assure that communities are aware of procedures to protect health and safety, and communicate the chemical industry's commitment to provide hazard information to the public.

The first of these two programs is called Community Awareness and Emergency Response, or, abbreviated, CAER.

The purpose of the CAER is to enhance public awareness of the operations and safety practices of the community's chemical industry neighbors and to involve members of the community, industry, and interested citizens in the development of well coordinated emergency response systems.

The focus of the CAER initiatives is at the community level. The primary catalyst for implementing the program is the plant manager in each locality.

Plant managers are to establish communication with local emergency response officials as well as with members of the public interested in emergency response planning.

Community participants will be provided with a description of the facility, the safety and accident prevention programs, the plant's emergency response capabilities, and its history of safe operations.

Information on the chemicals transported into or out of the plant or produced by the plant should be made available and readily accessible.

Material safety data sheets developed by employers under the hazard communication standard for each of these materials will be made available to the public.

The local industry representatives will be asked to work with the emergency response officials, other local industries, and interested citizens to review the community's existing emergency response system.

Where no emergency response plan exists, this team will be expected to develop, implement, and perfect a plan to protect the community in the event of a chemical emergency.

If an emergency response system is already in place, it must be integrated with the industry system and a well-coordinated plan developed to cover all types of emergency situations.

The initial task of this cooperative effort will be to identify and evaluate the risks that are present and then to determine and implement changes in the system to address those risks. Attention must also be devoted to communicating the emergency response plans to the public.

The second major project developed by the chemical industry is a series of programs designed to provide hands-on assistance to those responding to chemical emergencies, a system of hazard information communication, and a program for training those who are the first to respond to the scene of a chemical emergency.

Requests for assistance in one of these areas will be handled by the National Chemical Response and Information Center—or, abbreviated, NCRIC—which has been established by CMA to coordinate the following programs.

Chemtrec, which has been CMA's very highly successful program providing information to emergency response personnel, will continue as it has for 14 years in the same capacity, but it will be expanded to provide information to non-transportation emergencies.

The services that Chemtrec provides range from providing first aid advice to providing a telephone bridge between on-scene medical authorities and medical personnel of member companies.

The second initiative under NCRIC is Chemnet. It's a new program designed to provide expert, on-site assistance through a mutual aid network of industry and other emergency response teams.

The third is the Chemical Referral Center, which will be a source for information on chemicals and their hazards in non-emergency

situations. An 800 telephone number will be used to enable the public to obtain such information.

The fourth initiative is the Emergency Response Training, which is a program designed to provide training materials to industry personnel, firefighters, policemen, and other first responders to assist in emergency response.

The objective of the CAER and NCRIC programs is to provide better informed and better trained response teams for emergency situations and more accessible sources of chemical hazard information and a greater public awareness of emergency response programs.

In the area of product management, to speak about Du Pont's programs, the primary goal is to prevent all occupational injuries and illnesses to Du Pont employees and to provide the information and assistance needed by our contractors and customers to prevent injuries to their workers.

Like other chemical companies, Du Pont incorporates practices and procedures into the production and marketing of all products to provide the greatest control over hazards associated with the use of those products.

While product management practices must be tailored to each product and to the hazardous nature, the methods of production, and the foreseeable uses of that product, the basic elements of a good product management system are the same for all products.

When a new product is developed, it must be thoroughly evaluated to the extent possible to determine what, if any, hazards it may have.

Through review of all published and internal data sources or in-house toxicity tests, a determination and assessment of the health and physical hazards of that product is made.

On the basis of the information obtained from these tests and literature studies, the hazards and risks involved in the production and use of the product are assessed. Safe handling procedures and hazard warnings can then be developed, along with engineering controls and proper safety precautions and equipment.

It has long been Du Pont's policy that employees be informed of the hazards posed by the chemicals and operations they are exposed to. Employees are trained in the proper operating procedures with particular emphasis on personal safety. The information and training provided to our employees are described more fully in CMA's written comments to the record.

Contractors who handle and customers who buy Du Pont products are also provided with all pertinent information that will assist them in using and disposing of our products safely and in an environmentally acceptable manner.

Examples of literature provided to customers on particular materials are being provided to the subcommittee for reference. They include material safety data sheets—or MSDS's—handling and storage bulletins, and other product safety bulletins which provide information on the safe use of the chemicals. Video materials, personal visits, and seminars are also provided to customers for some products.

Du Pont's products are labeled with that information which may be needed on an immediate basis. This information includes proper

handling precautions and hazard warnings. The label also identifies the material within the container so that reference can be made to the appropriate material safety data sheet.

An important component in helping customers become aware of pertinent safety and health information is the timely provision of new information regarding the safe use of the products.

Du Pont notifies customers and contractors of all significant developments in toxicity testing which is conducted by Du Pont or by other reliable laboratories.

We firmly believe that attention must be constantly devoted to the communication of hazard information and instructions on safe handling practices in every phase of product manufacturing and marketing.

To continue with the CMA testimony, Mr. Evans will present his testimony, with your permission, Mr. Chairman, and then we will entertain any questions that you may have.

[The prepared statement of Dr. Karrh follows:]

PREPARED STATEMENT OF BRUCE W. KARRH, M.D., VICE PRESIDENT OF SAFETY, HEALTH AND ENVIRONMENTAL AFFAIRS, E.I. DU PONT DE NEMOURS & CO., ON BEHALF OF THE CHEMICAL MANUFACTURERS ASSOCIATION

Good morning, Mr. Chairman. I am Bruce W. Karrh of E. I. du Pont de Nemours and Company. As Vice President with responsibility for safety, health and environmental affairs, I am responsible for the safety and occupational health programs in Du Pont. I also serve as Chairman of the Health and Safety Committee of the Chemical Manufacturers Association (CMA).

I appreciate the opportunity to appear before this Subcommittee and speak on behalf of CMA. I would like to address new initiatives which have recently been undertaken by the chemical industry to promote enhanced public awareness of the industry's safety and emergency response operations and improved coordination between industry and community emergency response activities. I would also like to briefly describe some product management practices employed by Du Pont to control the risks associated with the production, use, and handling of our products.

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chemical industry's commitment to provide hazard information to the public.

The first of these two programs is called Community Awareness and Emergency Response (CAER). The purpose of CAER is to enhance public awareness of the operations and safety practices of the community's chemical industry neighbors and to involve members of the community, industry, and interested citizens in the development of well-coordinated emergency response systems.

The focus of the CAER initiatives is at the community level. The primary catalyst for implementing the program is the plant manager in each locality. Plant managers are to establish communication with local emergency response officials as well as members of the public interested in emergency response planning. Community participants will be provided with a description of the facility, the safety and accident prevention programs, the plant's emergency response capabilities and its history of safe operation.

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The initial task of this cooperative effort will be to identify and evalute the risks that are present, and then to determine and implement changes in the system to address those risks. Attention must also be devoted to communicating the emergency response plans to the public.

The second major project developed by the chemical industry is a series of programs designed to provide hands-on assistance to those responding to chemical emergencies, a system of hazard information communication and a program for training those who are the first to respond to the scene of a chemical emergency. Requests for assistance in one of these

areas will be handled by the National Chemical Response and Information Center (NCRIC) established by CMA to coordinate the following programs:

1. CHEMTREC has been a highly successful CMA program providing information to emergency response personnel. It will continue as it has for 14 years in this capacity, but will be expanded to provide information to non-transportation emergencies. The services CHEMTREC provides range from providing first aid advice to providing a telephone bridge between on-scene medical authorities and medical personnel of member companies.

2. CHEMNET is a new program designed to provide expert on-site assistance through a mutual aid network of industry and other emergency response teams.

3. The Chemical Referral Center will be a source for information on chemicals and their hazards in non-emergency situations. An "800" telephone number will be used to enable the public to obtain such information.

4. Emergency Response Training is a program designed to provide training materials to industry personnel, firefighters, policemen and other first responders to assist in emergency response training.

The objective of the CAER and NCRIC programs is to provide better informed, better trained response teams for emergency situations, more accessible sources of chemical hazard information and a greater public awareness of emergency response programs.

PRODUCT MANAGEMENT

The primary goal of Du Pont's product management practices is to prevent all occupational injuries and illnesses to Du Pont employees, and to provide the information and assistance needed by our contractors and customers to prevent injuries to their workers. Like other chemical companies, Du Pont incorporates practices and procedures into the production and marketing of all products to provide the greatest control over hazards associated with the use of those products.

While product management practices must be tailored to each product and to the hazardous nature, the methods of production, and the foreseeable uses of that product, the basic elements of a good product management system are the same for all products.

When a new product is developed, it must be thoroughly evaluated to the extent possible to determine what if any

hazards it may have. Through review of all published and internal data sources or in-house toxicity tests, a determination and assessment of the health and physical hazards of that product is made.

On the basis of the information obtained from these tests and literature studies, the hazards and risks involved in the production and use of the product are assessed. Safe handling procedures and hazard warnings can then be developed, along with engineering controls and proper safety precautions and equipment.

It has long been Du Pont's policy that employees be informed of the hazards posed by the chemicals and operations they are exposed to. Employees are trained in the proper operating procedures with particular emphasis on personal safety. The information and training provided to our employees are described more fully in CMA's written comments.

Contractors who handle and customers who buy Du Pont products are also provided with all pertinent information that will assist them in using and disposing of our products safely and in an environmentally acceptable manner. Examples of literature provided on particular materials are attached to the written statement. They include MSDSs, handling and storage

bulletins, and other product safety bulletins which provide information on the safe use of the chemicals. Video materials, personal visits and seminars are also provided to customers for some products.

Du Pont's products are labeled with that information which may be needed on an immediate basis. This information includes proper handling precautions and hazard warnings. The label also identifies the material within the container so that reference can be made to the appropriate material safety data sheet.

An important component in helping customers become aware of pertinent safety and health information is the timely provision of new information regarding the safe use of the products. Du Pont notifies customers and contractors of all significant developments in toxicity testing conducted by Du Pont or other reliable laboratories.

Attention must be constantly devoted to the communication of hazard information and instructions on safe handling practices in every phase of product manufacturing and marketing.

Mr. EVANS. Thank you, Dr. Karrh.

Mr. Chairman, I'm Tom Evans, director of environmental health for the Monsanto Co., and I currently chair the CMA Task Group on Right to Know.

I had the opportunity and the privilege to testify before your committee on May 27, 1981, to tell you about how Monsanto handled hazard communication and the views of the Chemical Manufacturers Association prior to the issue of the Federal OSHA hazard communication standard.

I again appreciate the opportunity to appear for CMA and to tell you about Monsanto's perceptions of, and efforts to comply with, the new standard and explain briefly Monsanto's practices regarding product safety.

Since November 25, 1983, Monsanto, and, I assume, all of the chemical manufacturing and processing employers have been busy working to achieve compliance with the new OSHA standard.

I am certain that they, like Monsanto, are finding that the new rule is incredibly comprehensive and far-reaching. Contrary to its critics, it is anything but weak and full of loopholes. Those who are critical of the standard either have not read it or choose on their own not to understand its impact on the chemical industry.

The chemical hazard evaluation provisions of this rule extend coverage of the standard to far more substances than any other legislative or regulatory initiative yet offered around the country.

The standard's requirements relating to the provision of material safety data sheets to workers and downstream customers require manufacturers to develop them when they do not exist and to revise and update those that do exist.

The trade secret provisions of the standard compel manufacturers to evaluate their product lines and reassess their need for security.

To comply with the standard, companies are reviewing confidentiality claims and restricting their claims of proprietary information to fewer of their products. My company, for example, plans to reduce its claims substantially.

The preemptive effect of the standard has been upheld by a Federal district court in New Jersey, and we expect the Third Circuit Court of Appeals to rule in a similar manner in the suit filed against the OSHA rule.

Probably the most controversial feature of the OSHA standard is its scope, which limits coverage to manufacturing workplaces in SIC Codes 20 through 39.

This limitation was imposed because OSHA felt that this was where the action was—that is, the place to start was where the chemicals are manufactured. OSHA expects that information will flow throughout the marketplace anyway.

It may be presumptuous of us in the chemical industry who are already covered by the OSHA standard to suggest that the standard coverage be extended to all workplaces, but we do favor such an extension. We do manufacture and process most of these chemicals, and we want everyone who uses them to have access to our safety and health information.

According to the National Safety Council, our workplaces are the safest in the manufacturing community. We have earned this dis-

tinction because we recognize hazards and make our employees aware through training and education programs. Even if these other workplaces do not have elaborate training and education programs, they could at least maintain copies of the material safety data sheets as a reference for those who wanted or needed the information.

In previous testimony before your committee, Monsanto and CMA confirmed our position that employees have the right to know about chemicals with which they work and to which they are exposed on their jobs. We endorsed a uniform Federal standard.

Monsanto and CMA further believe that the same information made available to our employees should also be made available to the community in which our plants are located.

In the workplace, distribution of Monsanto material safety data sheets to customers can be tracked so that we can be sure that updated and revised copies can be sent automatically to those who received the originals.

Monsanto plans to coordinate distribution of material safety data sheets to our customers through our order receipt and billing departments and to send customers copies when orders are received.

We are working to computerize our records of customer recipients of MSDS's so that we can followup accurately with mass mailings followed by individual mailings to specific new customers as they develop. We also plan to provide these data sheets to warehouse terminals and bulk carriers with whom we arrange to handle our products.

At Monsanto, we are currently in the midst of a massive revision and upgrading program to bring our material safety data sheets into compliance with the OSHA standard. Believe me, we need every day to reach this level of compliance.

Not only are we updating, but we're developing new data sheets for process intermediate chemicals that are not shipped to customers but just used as raw materials in our own processes that generate our products for commerce. When these new sheets are available, we will also make them available to whoever wants them in the plant community.

Mr. Chairman, we're working hard to comply with the new standard. As I've told you, the chemical industry has a great deal of work to do to comply with the standard.

Added to the tremendous burden the standard poses, there are 21 State laws that have the same purpose but use different methods.

We must oppose any State or Federal initiatives that force upon our industry labeling, material safety data sheets, or trade secret provisions that differ from the OSHA standard because of the burden it imposes on interstate commerce and because the differing requirements add nothing but confusion.

Our opposition to a multitude of State laws, however, should not be interpreted as opposition to the concept of hazard communication or the right to know.

Mr. Chairman, I have also been asked to briefly describe Monsanto's product safety program. A more detailed description is included in the written statement. We call it product stewardship.

By that, we mean practices that will see that Monsanto's products will not present an unreasonable risk of harm to human life

or health or to the environment when they are properly handled, transported, or used.

Product stewardship at Monsanto involves collecting, reviewing, assessing, and communicating data about the health and environmental effects of our products.

It integrates the objective data on the effects from toxicology experiments, epidemiology, medical observations, industrial hygiene monitoring information, environmental monitoring, and predictive environmental fate work.

It involves consideration of possible exposure during manufacture, distribution, use, and disposal.

Not all products require the same amount of data to permit an adequate safety evaluation. We complete preliminary product safety reviews for all new product candidates before any samples are shipped for customer evaluation.

We complete a more detailed review, a material safety data sheet, and a shipping classification form before new products are commercialized.

For existing products, the material safety data sheets are periodically reevaluated in light of significant new information relative to the product.

Not all chemicals are regulated by government agencies. As a result of our own product stewardship and testing program, we may introduce the material to our program called Monsanto Workplace Permissible Exposure Limit—MWPEL.

For an unregulated material, we will determine safe exposure limits in our workplaces and impose this self-regulation upon ourselves.

Our limits may be different from OSHA, NIOSH, or ACGIH. Effectively, we run our own health standard determination on substances that we believe deserve added attention. We also include these recommended exposure levels on our material safety data sheets that we send to our customers.

Our program is evergreen, Mr. Chairman. We are constantly reviewing our product lines.

In conclusion, Mr. Chairman, we believe that the regulatory and voluntary initiatives that are in place provide our employees and downstream users with the information about chemicals and their hazards that they need to protect their health and safety. These same programs will extend to all workplaces and beyond to satisfy the right of all to know.

We are confident that the promulgation of the OSHA rule will help improve the health and safety performance of the chemical industry. We believe that other workplaces that develop training and education programs for their employees as a result of this new standard, and apply the safety information we provide them, will demonstrate a dramatic improvement in the number of workplace injuries and illnesses reported in the years to come. The OSHA standard will benefit our entire society.

Thank you again for the opportunity to appear, Mr. Chairman, and I, too, will be happy to answer any questions.

[The prepared statement of Mr. Evans follows:]

Oral Testimony of Thomas F. Evans
Director, Environmental Health
Monsanto Company
On Behalf of the
Chemical Manufacturers Association
Before
The Health and Safety Subcommittee
of
The House Education and Labor Committee
May 8, 1985

Mr. Chairman, I am Thomas F. Evans, Director of Environmental Health for the Monsanto Company and I currently chair the CMA Task Group on Right to Know. I had the opportunity and the privilege to testify before your Committee on May 27, 1981 to tell you about how Monsanto handled Hazard Communication and the views of the Chemical Manufacturers Association prior to the issuance of the Federal OSHA Hazard Communication Standard. I again appreciate the opportunity to appear for CMA and tell you about Monsanto's perception of and efforts to comply with the new standard and to explain briefly Monsanto's practices regarding Product Safety.

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it or chose on their own not to understand its impact on the chemical industry.

The chemical hazard evaluation provisions of this rule extends coverage of the standard to far more substances than any other legislative or regulatory initiative yet offered around the country. The standard's requirements relating to the provision of Material Safety Data Sheets to workers and downstream customers, requires manufacturers to develop them when they do not exist and to revise and update those that do exist. The trade secret provisions of the standard compel manufacturers to evaluate their product lines and reassess their need for security. To comply with the standard, companies are reviewing confidentiality claims and restricting their claims of proprietary information to fewer of their products. My company, for example, plans to reduce its claims substantially.

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It may be presumptious of us in the chemical industry who are already covered by the OSHA standard to suggest that the standard

coverage should be extended to all workplaces, but we do favor such an extension. We do manufacture and process most of these chemicals and we want everyone who uses them to have access to our safety and health information. According to the National Safety Council, our workplaces are the safest in the manufacturing community. We have earned this distinction because we recognize hazards and make our employees aware through training and education programs. Even if these other workplaces do not have elaborate training and education programs, they could at least maintain copies of the material safety data sheets as a reference for those who wanted or needed the information.

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to warehouse terminals and bulk carriers with whom we arrange to handle our products.

At Monsanto, we are currently in the midst of a massive revision and upgrading program to bring our MSDSs into compliance with the OSHA standard. Believe me, we need every day to reach this level of compliance. Not only are we updating, but we are developing new data sheets for process intermediate chemicals that are not shipped to customers, but are just used as raw materials in our own processes that generate our products for commerce. When these new sheets are available, we will also make them available to whomever wants them in in the plant community.

Mr. Chairman, we are working hard to comply with the new standard. As I have told you, the chemical industry has a great deal of work to do to comply with the standard. Added to the tremendous burden the standard poses, there are twenty-one state laws that have the same purpose - but use different methods. We must oppose any state or federal initiatives that force upon our industry labeling, material safety data sheets or trade secret provisions that differ from the OSHA Standard because of the burden it imposes on interstate commerce and because the differing requirements add nothing but confusion. Our opposition to a multitude of state laws, however, should not be interpreted as opposition to the concept of hazard communication or the right-to-know.

I have also been asked to briefly describe Monsanto's product safety program. A more detailed description is included in the written statement. We call it Product Stewardship. By that we mean, practices that will see that Monsanto's products will not present an unreasonable

risk of harm to human life or health, or to the environment when they are properly handled, transported or used.

Product Stewardship at Monsanto involves collecting, reviewing, assessing and communicating data about the health and environmental effects of our products. It integrates the objective data on the effects from toxicology experiments, epidemiology, medical observations, industrial hygiene monitoring information, environmental monitoring, and predictive environmental fate work. It involves consideration of possible exposure during manufacture, distribution, use and disposal. Not all products require the same amount of data to permit an adequate safety evaluation. We complete preliminary product safety reviews for all new product candidates before any samples are shipped for customer evaluation. We complete a more detailed review, a material safety data sheet and a shipping classification form before new products are commercialized. For existing products, the MSDSs are periodically reevaluated in light of significant new information relative to the product.

Not all chemicals are regulated by government agencies. As a result of our own product stewardship and testing program, we may introduce the material to our program called, Monsanto Workplace Permissible Exposure Limit (MWPEL). For an unregulated material, we will determine safe exposure limits in our workplaces and impose this self-regulation upon ourselves. Our limits may be different from OSHA, NIOSH or ACGIH. Effectively, we run our own health standard determination on substances that we believe deserve the added attention. We also include these recommended exposure levels on our Material Safety Data Sheets that we send to our customers. Our program is evergreen, Mr. Chairman; we are constantly reviewing our product lines.

In conclusion, Mr. Chairman, we believe that the regulatory and voluntary initiatives that are in place provide our employees and downstream users with the information about chemicals and their hazards that they need to protect their health and safety. These same programs will extend to all workplaces and beyond to satisfy the right of all to know. We are confident that the promulgation of the OSHA rule will help improve the health and safety performance of the chemical industry. We believe that other workplaces that develop training and education programs for their employees as a result of this new standard, and apply the safety information we provide them will demonstrate a dramatic improvement in the number of workplace injuries and illnesses reported in the years to come. The OSHA standard will benefit our entire society. Thank you again for the opportunity to appear Mr. Chairman. I'll be happy to answer any questions you may have.

[The prepared statement of the Chemical Manufacturers Association follows:]

Prepared Statement of the Chemical Manufacturers Association

EXECUTIVE SUMMARY

The chemical industry works hard to ensure that chemicals are managed safely by chemical industry workers, customers, and consumers. Product management has several components: testing the toxicity of chemicals; devising safe handling procedures for storage, transfer, and use of chemicals; investing in personal protective equipment and engineering controls; assuring effective communication of hazards; and analyzing industrial processes for safety.

The chemical industry develops safety practices and implements such practices in its workplaces. In addition, the industry provides information and assistance on the safe handling of chemicals to the users of our products so their workers may be protected. The information is passed on to customers by means of material safety data sheets, labels, and product literature.

Although the chemical industry began labeling and worker training many years ago, we face a major challenge to implement fully the Occupational Safety and Health Administration (OSHA) hazard communication standard. The standard will establish an effective program for communicating product safety information to chemical industry workers and purchasers of chemicals in the manufacturing sector. The Chemical Manufacturers Association believes the standard should be expanded to cover all employers and workers who use chemicals.

CMA strongly supports a federal standard for hazard communication that will be paramount to state law. Congress correctly perceived the need for uniform

national occupational health and safety standards when it passed the Occupational Safety and Health Act. Inconsistent and conflicting state right-to-know laws, which do not improve the information and training workers must receive under the OSHA standard, place unjustified burdens on interstate commerce and demonstrate the impracticality of allowing states to have differing requirements.

In addition to the advantage of uniformity, CMA believes that the OSHA's hazard communication provides a better framework than any of the state and local laws. Most importantly, the OSHA standard covers a much broader range of chemicals than any state right-to-know law. Under the standard, all chemicals used or produced in the workplace must be evaluated for their physical and health hazards. Using the information from the hazard evaluation, the standard requires comprehensive and effective material safety data sheets (MSDS), labeling, and education and training requirements for hazardous chemicals. These requirements will promote continuing improvement in current chemical industry hazard communication practices.

The hazard communication standard's trade secret provision ensures that workers will recieve necessary information for their protection, while providing a means for employers to preserve trade secret information. Information about the hazards of chemicals, the fact that a trade secret chemical is present, and the generic identity of the trade secret chemical must always be disclosed.

The chemical industry is dedicated not only to the safe use of chemicals, but also to reducing the consequences of accidents should they occur. CMA recently renewed its dedication by announcing two voluntary programs - Community

Awareness and Emergency Response (CAER), and the National Chemical Response and Information Center (NCRIC). These two programs are designed to provide the public with information about chemicals, promote emergency response planning, and provide assistance in the event of chemical emergencies.

The Chemical Manufacturers Association (CMA) welcomes the opportunity to discuss the chemical industry's product management practices as well as the Occupational Safety and Health Administration (OSHA) hazard communication standard. Safety is one of the cornerstones on which CMA was founded. Creation of the Association in 1872 came about partly because of the determination of a small group of sulfuric acid manufacturers to improve the safety of shipping procedures. Today, CMA is a non-profit trade association whose company members represent more than 90 percent of the production capacity for basic industrial chemicals in this country. The chemical industry recognizes the need to help protect the environment and to safeguard the health of its workers and the public from potential risks sometimes associated with chemicals. By formal vote of CMA's Board of Directors, the industry has publicly declared its intent to produce only those chemicals that can be manufactured, used, and disposed of safely. We have also pledged to communicate with employees, customers, and the public about significant health or environmental effects and methods necessary for safety and health protection.

Through effective product management, the chemical industry has compiled an outstanding safety record. In each of the last four years, the National Safety Council has rated it as either the safest or the second safest manufacturing industry in the country. This safety record results from the major commitment of resources by chemical companies to safe handling of products. The industry's product management practices reduce occupational risk to workers in chemical manufacturing workplaces, and in our customers' workplaces as well. Product management programs include safe handling practices

for storage, transfer, and use of chemical substances; personal protective equipment and engineering controls; process safety analysis; and hazard communication. The industry also provides technical information and services to its customers so that they can benefit from the manufacturers' experience in developing procedures for safe handling of chemical substances. In 1983, CMA released a report, entitled "An Industry Survey of Chemical Company Activities to Reduce Unreasonable Risk," which documented the range of practices in industry at that time.

There is no single "best" approach to product management. Indeed, product management practices are as varied as the chemical substances they apply to. By way of illustration, this statement discusses certain product management practices of three of CMA companies: Monsanto Company, E.I. Du Pont de Nemours & Company, and Dow Chemical Company. Du Pont and Dow have also submitted, for the record, illustrations of the kind of information they provide to their customers.

An important part of safe product management is worker training and education about the risks associated with the materials they handle. CMA believes that employees, and the public, have a right to health and safety information about chemicals. We believe all employees should have safety and health information about the chemicals in their work environment to which they might be exposed, and must know how to protect themselves accordingly. Emergency units, local officials, and interested public groups must also have the information necessary to plan for and respond to emergency situations. CMA's support for and efforts to implement the OSHA hazard communication standard illustrate our commitment to these principles. Two voluntary programs

CMA has recently initiated, the Community Awareness and Emergency Response (CAER) program and the National Chemical Response and Information Center (NCRIC), also demonstrate that commitment.

I. PRODUCT MANAGEMENT PRACTICES

The chemical industry devotes substantial time and resources to finding ways to make chemicals safer for workers, customers, the public, and the environment. The design of a product safety program depends on three fundamental factors:

- the physical hazards or toxicity of the chemical;
- the amount and type of expected human exposure or environmental release; and
- the ability to manage such factors as flammability, reactivity, stability or toxicity, or to reduce or prevent human contact.

Chemical manufacturers conduct laboratory testing to learn more about the toxicity and acceptable exposures for the substances they make. In addition to individual company testing of chemicals and research programs under CMA or other association auspices, the Chemical Industry Institute of Toxicology (CIIT) conducts research on the safety of chemicals and on the development of new testing methods. CIIT is an independent not-for-profit laboratory funded by "no-strings" grants from the chemical industry. Testing improves a chemical manufacturer's understanding of the safety of its own products and provides the information for communication about hazards to customers and consumers.

One of the most important steps in product management is communication, to make sure that managers, plant workers, and downstream users have reliable information relevant to the safe handling of chemicals. Material safety data

sheets (MSDSs), product literature, and labels help provide this vital information.

The following three sections describe selected features of the product management programs of three CMA member companies.

A. E.I. du Pont de Nemours & Company

Product management is a process of hazards control -- of recognizing and assessing the hazards associated with the development, handling, and use of any product and then developing methods of controlling those hazards so that no one is knowingly exposed to any risk associated with its use. Today, product management is recognized by the chemical industry as a necessary and primary component in the marketing of any chemical product. The bottom line is unless and until a product can be manufactured, handled, and used safely, we will not produce it. All occupational injuries and illnesses can be prevented; it is our goal to do so.

The elements of proper product management are the same for all chemical products. They include:

- Determination and assessment of the health and physical hazards of the product;

- Determination of proper handling procedures, protective control measures, and safety precautions;

- Training of du Pont and contractor employees in the hazards and proper handling procedures;

- Notification of carriers and customers of hazard information and proper handling procedures; and
- Labeling of product containers with appropriate information.

The methods used to carry out each of the component tasks will vary from product to product and process to process. They must be tailored to the particular chemical, its toxicological properties, methods of production, and intended uses. A brief discussion of some of the methods employed by Du Pont to assure that each of the components of product management is properly and adequately performed may be helpful in understanding this process.

1. Hazard Determination. All products are evaluated for their physical hazards and toxicological properties. All pertinent information and data are researched, including published studies, internal studies and test data, and other reliable sources. Du Pont's Haskell Laboratory for Toxicology and Industrial Medicine has published over 300 articles on studies it has conducted and has produced over 15,000 in-house technical reports. Both sources are used in determining the hazards of many chemicals.

In addition, certain chemicals for which insufficient data exist are tested at Haskell. Haskell, with a staff of 215 professional employees, conducts approximately 600 tests on chemicals every year. Usually, 25 to 30 long-term animal tests are being conducted at one time. These tests cost anywhere from $300,000 to $1,000,000 per test. Haskell Lab is often called on not only to give

toxicological and industrial medical information, but also advice on whether and how a product can be used considering health and environmental effects.

Hazard assessments are made based on the most appropriate human epidemiology studies and, if such studies are not available, on the most reliable animal test data.

The development of monomethylformamide (MMF) for production by Du Pont provides a typical example of the hazard assessment process. In 1981, Du Pont began making research quantities of MMF in laboratories at Du Pont's Experimental Station. Haskell Laboratory researched the available literature on MMF, both published and unpublished, and provided advice as to possible hazards.

A provisional acceptable exposure limit was established based on the Haskell research and the extensive knowledge of dimethylformamide, which has similar properties. Haskell also recommended a subacute inhalation toxicity study.

In 1983, after completion of the subacute toxicity test, Haskell finalized the acceptable exposure limit and completed a formal hazard determination establishing controls to limit exposure, such as the acceptable exposure limit, avoidance of skin contact, and a biological monitoring limit.

When the decision was made to go into commercial production, additional tests were run to obtain information on aquatic toxicity, permeation of protective clothing, breakthrough on respirator cartridges, odor threshold, and leak detection techniques.

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With this information and after formal employee communication and training, MMF production began in April, 1985.

2. Proper handling procedures and safety precautions. After the determination and assessment of product hazards and risks, equipment and engineering controls are designed, safe work practices and procedures developed, and proper protective equipment made available to assure the product can be manufactured without subjecting workers to exposures above safe limits. Haskell Laboratory and Du Pont's Medical Division assist in setting acceptable exposure limits and will review exposure control programs for particular processes.

3. Employee Training. It is and has been Du Pont's policy that employees are notified of hazards posed by chemicals encountered in the workplace. Information provided includes the identity of chemicals in the workplace and the hazards associated with those chemicals, including appropriate new test or study results. It includes thorough instruction in the proper practices and procedures for safe handling of the chemicals in an employee's work area. Material Safety Data Sheets or equivalent information sources are provided to employees and they are informed of the requirements of government, company, and plant standards. Employees are advised of protective control measures and equipment. Training includes the proper usage of respirators when such protection is required.

Employees are informed of the exposure limits set by law or by Du Pont and potential health effects from over-exposure. The procedures used by Du Pont to monitor exposure are part of the employees' training, and monitoring results are conveyed to the affected employees. Finally, the employees are given first

aid information and are trained in emergency procedures in the event of a release or over-exposure to toxic materials. Each plant determines how this information is conveyed and how training is conducted for its employees.

4. Customer notification. Carriers and customers of Du Pont products are provided with MSDSs and all pertinent information that will assist them in using and disposing of our products safely and in an environmentally acceptable manner. In a separate submission for the Subcommittee's reference which accompanies this written statement are examples of information provided to customers, including an MSDS for titanium tetrachloride as well as product bulletins for dimethyl sulfate. Often video tapes or slides are also made available to customers to instruct them on the safe handling of products. This information is continually updated with new toxicity information discovered by Du Pont or other reliable sources.

For example, employees, contractors, and customers were advised on five separate occasions between 1979 and 1982 of new toxicological information relating to the effects of formaldehyde exposure. Beginning in 1978, the Chemical Industry Institute of Toxicology (CIIT) began a two-year animal study on the effects of exposure of formaldehyde. Preliminary findings were released by CIIT at the 16, 18 and 24 month intervals of the study. Du Pont immediately sent letters to its carriers and customers that handle or buy formaldehyde informing them of these preliminary test results. Du Pont's employees were also promptly notified. As a result of these preliminary findings, Du Pont began an epidemiology study of eight sites. When CIIT's final study results were released in February 1982, and again when Du Pont's epidemiology study was

completed in May 1982, employees, contractors, and customers were immediately notified by letter of the results.

In addition to material safety data sheets and product bulletins, it is important to supply emergency information and hazard warnings on labels for immediate reference. The label should contain critical information which would be needed immediately or in an emergency situation. It should also identify the product in a manner that permits easy reference to the appropriate material safety data sheets. It is important to keep the label warnings clear and the language succinct so that the necessary information can be quickly and easily obtained.

Product management practices require that attention to health, safety, and environmental impact be a part of every stage of the marketing of a product from its inception and development to its sale and use.

B. Monsanto Company

Monsanto has a long history of product stewardship. In the early phases of this program, the primary focus was on product quality. The product safety aspects of the program came into more prominence in the fifties and sixties and continued to expand in the seventies.

Today, Monsanto has between 200 and 300 full-time employees in both the corporate organization and operating companies involved in product stewardship. Specialists in the fields of toxicology, occupational medicine, industrial

hygiene, analytical chemistry and other related fields have ongoing responsibility to review and assess the risk of our products.

For example, in 1984, Monsanto expended more than ten million dollars ($10,000,000) to perform toxicology tests on products and raw materials manufactured and used by the company.

Monsanto assures the safety of its products for reasons of both social responsibility and good business. Monsanto does not police its product safety entirely on its own. Like other chemical firms, we work with regulatory agencies that administer the various chemical control laws. For example, we must notify the U.S. EPA or FDA of our intention to produce a new chemical. These agencies require extensive health and environmental testing for pesticides, food additives, and drugs sold in the U.S., and may require similar tests for other types of chemicals, depending on the potential use and hazard of the material.

Monsanto currently develops 25 to 30 new products each year requiring government notification. We make a preliminary study of a potential new product's safety soon after it emerges from the laboratory. Its acute or immediate toxicity is determined, and its long-term health and environmental effects are professionally assessed using available information. Still another, more extensive, study of the new product is made later in its development, but well before it is fully commercialized. This second look may involve lengthy health-effects testing in which experimental animals are fed or otherwise exposed to the product to assist in evaluating its potential for causing chronic

effects or other serious diseases. If its passes these tests and is reviewed and approved by government agencies, the product will reach the marketplace.

Monsanto also periodically reviews the health and environmental effects of its existing products. The results of these reviews will determine whether any new toxicology or environmental tests need to be conducted on an existing product. Federal regulatory agencies also have the authority to review and reassess Monsanto's existing products and can prescribe additional safety studies if they feel they are needed.

Monsanto conducts most of its health and toxicology studies at its own Environmental Health Laboratory in St. Louis. Since its construction in 1978 for twelve million dollars ($12,000,000), this state-of-the-art facility has run more than 800 tests on the immediate and long-term effects of Monsanto materials. Many other toxicology tests are done for Monsanto by independent laboratories, and the validity of these tests is regularly audited by company quality assurance experts. Monsanto also helped found and continues to support the Chemical Industry Institute of Toxicology (CIIT) in North Carolina. This independent chemical research and testing facility is among the best in the world.

Not all chemicals are regulated by government agencies. As a result of our own product stewardship and testing program, we may introduce a material to our program called Monsanto Workplace Permissible Exposure Limit (MWPEL). For an unregulated material, we will determine safe exposure limits in our workplaces and impose this regulation upon ourselves. Our limits may be more stringent than OSHA, NIOSH or ACGIH. Effectively, we run our own health standard

determination on substances that we believe deserve the added attention. This program is continuing also, as we constantly review our product line.

Information obtained from testing and other sources is used to develop and update material safety data sheets (MSDS) for all products the company manufactures. The MSDSs are distributed to employees, distributors, transporters, customers, and others that might find the information helpful. The MSDSs are updated and redistributed as significant new information becomes available.

Monsanto's product stewardship program has evolved over the years and will continue to evolve to stay abreast of state-of-the-art risk assessment approaches. Governmental oversight through regulatory intervention is woven into the company's program and provides checks and balances the public needs for appropriate chemical control.

Hazard communication and training is an important element of Monsanto's product stewardship program. Employees, customers, distributors, and those that transport or in other ways come in contact with our products are included in this program.

In the workplace, in addition to monitoring our employees' health and the work environment, we train our employees in safe operating practices and the proper use of protective devices and equipment. To the extent feasible, appropriate safety provisions and health considerations are incorporated into the design of all new facilities, and engineering controls are retrofitted to

existing facilities. When this is not feasible, we provide appropriate protective devices and equipment and train our employees on their proper use.

Once a product leaves the Monsanto workplace, there are several ways in which those downstream of us are apprised of the hazards and appropriate handling practices for the product. All Monsanto goods, be they package or bulk, are labeled in accordance with Monsanto labeling guidelines. These guidelines provide criteria for determining whether precautionary statements, warning statements and first aid procedures are needed on the label, and, if so, what these statements should say, based on the hazards involved. In addition, our herbicide and pesticide products are labeled in accordance with FIFRA requirements.

Monsanto policy also requires providing customers, distributors, and transporters of Monsanto products with appropriate copies of material safety data sheets (MSDS). In addition to MSDS, technical brochures describing product properties are also made available to downstream users for most Monsanto products. For those products requiring special handling, such as strong acids, detailed handling booklets have been prepared and distributed to those that have need for such information.

Both product technical service and product safety personnel are available to assist with the proper handling and use of Monsanto products. These services include a variety of activities ranging from telephone consultation to hands-on training and demonstration in a customer's facility. Emergency telephone numbers are provided on the MSDS and Monsanto physicians are on call 24 hours a day, 7 days a week, to assist as necessary. In addition, non-emergency phone

numbers are on the MSDS to provide those downstream users and handlers of Monsanto products with a contact to assist them with proper handling and use of the material.

At Monsanto, the development and maintenance of effective labels, MSDSs, technical literature and technical service activities are managed by the operating units with assistance from staff departments, as necessary. In this way, these important activities are brought as close as possible to the line operations of manufacturing and marketing. This assures close coordination and an integrated product stewardship program.

C. Dow Chemical Company

Dow has recognized, for many years, that chemical substances can cause harm if they are not handled properly and adequate safety precautions are not taken. We have also recognized that most chemical substances can be handled in such a way that the possibility for injury can be essentially eliminated.

Dow has undertaken extensive toxicological testing and hazard evaluation of its substances in order to be able to determine the nature and extent of the precautionary measures which are needed to ensure the safety of those working with these substances.

For a given chemical, each operation is examined in light of the available data and procedures are developed which will minimize exposure to the substance. Appropriate protective equipment, working practices, emergency procedures and warning labels are described. The results of such a continuing effort are shown

in the book on caustic soda and chlorine, which we are submitting separately to the Subcommittee for reference. This book has been designed specifically for customers who use these materials. It is presented in a loose-leaf format to allow for additions and modifications as more information and experience are obtained.

In addition to making such information available, plant visits, seminars and other means of communication are used to make users aware of recommended safe practices. In some cases, Dow offers services which will assist customers in monitoring the adequacy of their safety procedures. An example of a recent announcement to our chlorine customers is also being submitted for the Subcommittee's reference. Similar information compilations and technical services are made available on a variety of Dow products.

II. HAZARD COMMUNICATION

The subject of hazard communication is one of long-standing interest and involvement for CMA and its member companies. Prior to any government regulation, CMA supported and promoted the development of the American National Standard Institute's (ANSI) standard for Precautionary Labeling of Hazardous Industrial Chemicals (ANSI Z129.1 - 1982). That standard, which covers the identification and labeling of physical and health hazards presented by chemicals, is widely used in the chemical industry. In addition, in 1980, CMA developed its own Guidelines for Hazard Communication Programs, which incorporated the elements of CMA members' well-established hazard communication programs.

CMA has consistently favored an effective, performance-oriented federal standard to protect workers and to promote a uniform national approach to hazard communication. We endorse the right of workers to know the hazards of substances to which they are exposed in the workplace. CMA urged OSHA to promulgate a standard that built on the existing effective industry programs.

CMA believes that the hazard communication standard is the most comprehensive, significant, far-reaching rule ever published by OSHA. We have described how three CMA member companies presently communicate hazard information and ensure safe use of their products. We believe the hazard communication standard will ensure the continuation and improvement of the industry's programs. The following paragraphs explain why CMA rejects the specific challenges organized labor has raised against alleged weaknesses in the standard.

Scope of Coverage. Although the standard applies to manufacturers, importers, distributors, and employers in Standard Industrial Classification (SIC) Codes 20-39 -- the manufacturing sector -- OSHA expects the standard to have downstream benefits. For example, labels are required on shipping containers regardless of where they are being sent. In addition, the availability of hazard information will increase in all of industry because of the mandatory distribution of MSDSs.

CMA encourages OSHA, however, to institute a new rulemaking to expand the scope of coverage of the standard to cover all workers who face a significant risk because they are or may be exposed to hazardous chemicals. CMA believes all such workers have a right to hazard information and appropriate training.

Substances Covered. The primary purpose of the rule is to ensure that all workplace chemicals are evaluated to determine their hazards. This is a very broad scope of chemical coverage in comparison to most of the state right-to-know laws, which are tied to a particular list of substances. Limiting coverage to a particular list would result in a much narrower scope than would be appropriate because there does not exist a single, comprehensive list of chemicals developed on the basis of thorough, professional evaluations of hazard information.

Although concern has been expressed that the federal standard does not cover a broad enough range of hazardous substances, the OSHA rule is actually comprehensive in its coverage of hazardous substances. Critics of the federal standard tend to ignore the feature that requires manufacturers of chemical substances to evaluate all other products and process intermediates produced in their workplaces and classify them as hazardous if they meet the strict guidelines of the standard. In this way, the OSHA rule covers all hazardous chemicals, not just the few that appear on the lists used in the states. Many custom-made trade name chemicals do not appear on any of these lists. Blends of lubricating oils and miscellaneous polymers are examples of these trade name chemicals.

Hazard Determination. The hazard communication standard places the primary duty for hazard evaluation on the employers responsible for introducing the chemical into the workplace -- the chemical manufacturers and the importers. Although downstream users may choose to evaluate the chemicals they purchase, they are permitted under the standard to rely on the information provided by their suppliers. OSHA found during the rulemaking that downstream users are

generally unable to develop hazard information on products because they are not familiar with the contents or properties of the chemicals. Since many of them are small concerns, without professional safety and health staffs, they want to be assured that hazard information is supplied to them so they can properly protect their employees. Chemical manufacturers and importers are in the best position to evaluate their products, and the standard requires that they do so and provide such information to their own employees as well as to other manufacturers purchasing their products.

It was clear during the rulemaking that there are no specific procedures available for hazard evaluation on which the various health professions can agree. Some chemicals have well-known hazards, have been used for many years, and have been studied extensively. Others are more complex and data are not readily available. The extent of search of the literature and of professional evaluation necessary for the latter will be much greater than for well-known chemicals. Therefore, we believe OSHA appropriately determined that, based on the record, the requirements should be performance-oriented, with appropriate definitions of hazards and general guidelines provided.

Trade Secrets. The task of reconciling the interest of employees in access to information on chemical identity with the protection of commercially sensitive information is a difficult one. The approach taken by OSHA in the standard ensures that necessary information is provided to protect employees, while means are provided for employers to preserve the confidentiality of bona fide trade secrets. CMA believes that trade secret claims will be the exception, rather than the rule. Even in instances of bona fide trade secrets, the holder must be able to provide adequate substantiation of the need for confidentiality.

Supporters of state right-to-know laws frequently assert that some of those laws have more stringent controls that limit employer claims for protection of proprietary business information. Every state right-to-know law, however, allows an employer to make a claim for trade secret protection.

Moreover, the federal standard allows for access to specific chemical identities by health professionals in non-emergencies. We know of no state law that has such disclosure requirements. But for the OSHA standard, a trade secret holder would be under no obligation to disclose such information in the great majority of states.

Finally, it should be clearly understood that the OSHA hazard communication standard requires all health effects information to be generated and disclosed regardless of the trade secret status of the chemical identity. The fact that a trade secret ingredient is present, and the generic identity of the ingredient, must also be disclosed.

MSDS, Labeling, and Education and Training Provisions. CMA believes the material safety data sheets (MSDS), labeling, and education and training provisions of the OSHA standard are comprehensive and effective. Not all state right-to-know laws, for example, contain all three provisions. The chemical industry believes all three elements are essential for effective communication of hazard information. State laws generally provide for the communication of the same kind of information as the federal standard -- but the state laws have differences that add to the cost of implementation for industry without necessarily adding to the information available to the worker.

Industry is in the midst of a major effort to update and create MSDSs that meet the OSHA standard's requirements. Companies must also review their labels to assure their adequacy. Finally, the education and training requirements create a substantial challenge for chemical manufacturers.

Preemption. Congress recognized the need for uniformity of worker health and safety regulations when it passed the OSH Act. "The chemical and physical hazards which characterize modern industry are not the problem of a single employer, a single industry, or a single state jurisdiction. The spread of industry and the mobility of the workforce combine to make the health and safety of the worker truly a national concern." (Report of the Committee on Labor and Public Welfare on the "Occupational Safety and Health Act of 1970", Report No. 91-1282, 91st Congress, 2d Session.) For these reasons, the Occupational Safety and Health Act contains an express preemption provision and special provisions on state authority on issues as to which OSHA has promulgated standards.

The record in the hazard communication rulemaking made it evident that the coverage and requirements of state and local right-to-know laws are consistent only in their inconsistency. The consequent cost and ineffectiveness of this decentralized effort has been well-documented in the public record. 48 Fed. Reg. 53324. This reinforces the wisdom of the preemption provision in the Act.

It is critical to the chemical industry that MSDS and labeling requirements be uniform nationwide. Any differences in these requirements will impose an unreasonable burden on interstate commerce. Differing federal and state cut-offs for listing health hazards of mixtures illustrate the kind of burden industry may face. Under the federal standard, if a mixture has not been

tested, all ingredients which are determined to be health hazards and which comprise 1 percent or greater (.1 percent for carcinogens) of the composition, must be listed on the MSDS. Massachusetts's law requires such listing if a hazardous ingredient comprises 1 percent of the mixture, or if a carcinogen comprises more than 1 part per million of the mixture. This provision would require a different MSDS in that state. States have differing labeling requirements too. New Jersey reuqires labels on containers of a mixture to include the chemical name of all hazardous substances in the container as well as the five predominant ingredients in the mixture. Such a requirement means mixtures will be labeled differently in New Jersey than they are under the federal standard.

There were very sound reasons for Congress to provide for preemption of state laws in this area. This policy decision, made by Congress, should not be lightly overturned. No evidence suggests that the reasons Congress chose to provide for preemption have changed. State right-to-know laws have been characterized as "more stringent" than the federal standard. We have just discussed why we think that such statements are inaccurate. Except for the scope of coverage of the standard, state laws do not necessarily provide more information to employees, but they do cost more to provide the same information to the employees.

III. CAER and NCRIC

The chemical industry is dedicated not only to accident prevention, but also to reducing the consequences of accidents should they occur. CMA has recently renewed its dedication by announcing two voluntary programs which will:

- expand industry's involvement in emergency planning
- assure that communities are aware of procedures to protect health and safety; and
- communicate the chemical industry's commitment to provide hazard information to the public.

A. Community Awareness and Emergency Response Program (CAER)

The overall goal of CAER is to improve the protection of public health and safety in the community.

There are two parts to the CAER program - Community Awareness, and Emergency Response. The Community Awareness part is designed to develop outreach programs to provide the public with information on chemicals manufactured or used at local chemical plants and to create an educated community that can participate effectively in the emergency response planning process. The Emergency Response planning part is designed to assist local plant managers to serve as catalysts in the process of community-wide emergency planning.

The American public is concerned about chemical hazards, the possiblity of a serious chemical emergency, and the steps industry is taking to prevent such an occurrence. The member companies of CMA recognize the need to provide the community with information on chemcials manufactured or used locally. The member companies also realize that, while most chemical plants have adequate emergency plans, there is room for improvement by more effectively integrating plant emergency response plans with those of the community. The CAER program is a critical element in dealing directly and expeditiously with the public's concern.

The basis of any effective community awareness and emergency response program is an informed public familiar with the operations of local chemical plants. Community awareness is a recurring theme in the CAER program. One of

the first steps in implementing the CAER program is to go into the community and contact the people who are needed to participate in emergency planning. This initial contact will include a description of the facility, its safety and accident prevention programs, its emergency response capability, and its safe operating history. The CAER program stresses the need to involve the community and educate the public during the entire implementation process.

Community awareness is based on the concept that all segments of the public should have access to information on hazardous chemicals. At a minimum, material safety data sheets that are developed by employers under the hazard communication standard should be available to the public. CMA member companies will voluntarily follow these principles in working with local community leaders and the public to provide information on the operation of the company to their local community.

The emergency response part of CAER involves a coordinated public and private sector initiative to improve or establish integrated community response plans and communications networks to protect the general public during emergencies. One of the objectives of such efforts will be to develop coordinated emergency plans for the community which will cover concerns about hazards emanating from chemical operations, and integrate them with emergency plans that cover natural disasters, transportation incidents, and utility failures.

Chemical industry plant managers will volunteer to serve as the catalyst for this program, and will work with local emergency response officials, other local industries, and interested citizens. The plans will be made available to employees, emergency service personnel, and the general public to:

- review emergency plans now in existence;
- develop plans if none exist;
- integrate chemical plant emergency plans with existing community emergency plans that cover all types of emergencies; and
- communicate with, and involve the local community to develop, implement, and perfect the plan.

Emergency response programs will be tailored to meet specific needs of each community. An effective program will identify:

- the key emergency officials and define what their roles, resources and concerns are;
- what the risks are -- their magnitude and type;
- what plans or planning exist;
- what needs to be done to address risks and initiate the over-all plan;
- the most effective way to match tasks to available resources;
- the potential weaknesses in existing plans for reducing risk, coordinating activities and completing the plan;
- what changes are needed to consolidate individual plans with the over-all community plan; to improve existing plans; and to reach agreement on an over-all coordinated plan;
- whether the coordinated plan is in writing;
- whether procedures are established for periodic testing, review and updating the plan, and raising community awareness;
- whether the public is involved in the total community emergency plan;
- whether emergency responders are trained.

Such response plans are not new to the chemical industry. Many of our industrial operations already participate in community emergency response networks. In reviewing these plans since the tragedy of Bhopal, we find there is a need to more effectively integrate our emergency response plans with those of the community.

B. National Chemical Response and Information Center (NCRIC)

The National Chemical Response and Information Center (NCRIC) is intended to provide: hands-on assistance in responding to chemical emergencies; a chemical hazard information referral service; and training for those first on the scene at chemical emergencies. The Center will serve an over-all need to

coordinate responses to requests for emergency information, assistance, training, and general non-emergency hazard information on chemicals. In effect, it will become an "Information Switchboard" for those wanting help or assistance from the chemical industry.

The new center will be built on the successful foundation provided by CHEMTREC. The fourteen-year-old transportation emergency center has responded to 244,000 calls. It is recognized by the Department of Transportation as the principal source of emergency information on hazardous materials involved in transportation accidents. It will continue to be located at CMA's Washington headquarters.

The center and participating companies will accomplish their objectives through four programs:

1. The Chemical Referral Center will provide yet another avenue of information for downstream users of chemicals and the public. The center will serve as a single contact point, using an "800" number, for those seeking hazard information on a non-emergency basis. The center will maintain an index relating chemical products to producing companies and information telephone numbers for the general public to call at all participating companies. The participating companies will respond to these requests for information.

2. CHEMTREC will expand its service to provide emergency response organizations with information for non-transportation emergencies which might occur, for example, at distribution points or warehouses.

CHEMTREC will provide immediate first aid advice to emergency response and medical personnel based on material safety data sheets. We currently have 90,000 MSDSs on file and will be receiving more as they are developed. CHEMTREC will also provide a telephone bridge between medical authorities treating injuries and the medical personnel of member companies.

2. A major new service, CHEMNET, will provide expert on-site assistance to deal with transportation and non-transportation emergencies through a mutual aid network of industry and for-hire emergency response teams. The nation will be organized through a grid system to guarantee rapid response. Participating members would be alerted through CHEMTREC.

4. Emergency Response Training has an objective of reducing injury and environmental damage and of identifying sources of assistance for rank-and-file firefighters, policemen, and industry teams dealing with hazardous incidents. In addition to its long standing training program for industry personnel, CMA will expand its program to include development of training materials and a lending library for all "first responders."

CONCLUSION

The chemical industry has a long history of commitment to the safe management of its products and has many programs and pratices to promote it. We

appreciate this opportunity to have appeared before the Subcommittee to discuss product safety management in the chemical industry.

Mr. GAYDOS. I want to thank you for your testimony, Mr. Evans.

Let me, at this time, take a break and explain to some of our students and visitors here what is going on in a practical matter here before the committee.

I have on my right Mr. Hayes, who is from the State of Illinois, and he serves on this subcommittee, and Mr. Chandler; he's from the State of Washington, and he serves on this subcommittee.

Mr. Hayes happens to be of the same party affiliation that I am—that is, Democrat—and Mr. Chandler is a Republican. We have what we call split representation. We take the whole House, and the percentage of the Democrats versus Republican and vice versa; that's what makes the determination as to how many we have serving on a committee and how the assignments are made.

This subcommittee is part of the full Committee on Education and Labor, which handles many, many things. It handles probably all the things that you'd be interested in—school lunch programs, your breakfast programs; it handles work study as you get a little older and go on to college; it gives you BEOG's—basic educational opportunity grants—and I can go on to a host of others.

It also enters into the labor field. We talk about the minimum wage for students, and probably some of the students here in a very few years will be confronted with that all-important question as to whether or not a minimum wage—meaning below the minimum wage—say, $2.50 an hour—should be the adopted proper wage for a young student, to give him an opportunity to learn how to work and to make some money; or should he fall under the then-prevailing minimum wage, which at this time is what, $3.35?

Mr. HAYES. $3.35.

Mr. GAYDOS. So those are points of controversy, and the Education and Labor Committee handles all things that are directly and indirectly involved in ERISA—that is, Employees Retirement Income and Security Act—and a lot of different areas—all of your arts and humanities and things of that nature, and higher educational needs such as aid to colleges and per capita contributions—things of that nature.

This subcommittee is called the Health and Safety Subcommittee, and, until 15 years ago, do you know that very few statutes were in being—excluding some very local, limited State statutes—the employees in this country worked without any standards.

There were some makeshift standards at times, and we had some voluntary associations, such as these two gentlemen here who belong to the chemical association that handles all the chemical industry. They banded together, and they made an association to approach problems that were common to the chemical industry, but that was distinguished from what was happening in the textile industry or some other industry.

So you can see the disarray that the country was in. The rationale behind establishing some 15 years ago OSHA—which is occupational safety and health legislation—was based upon that confusion and lack of protective standards.

There were some companies that did have good standards in place, and there were some informal standards which a lot of the companies followed, voluntarily in most instances because there were no sanctions; there was no agency to administer.

So what we did some 15 years ago was to put this OSHA together, and it had a lot of notoriety. That OSHA statute provided some types of standards, and there is a process of adopting standards.

A standard is nothing more than a regulation in writing addressing itself to some subject matter and setting down some things that have to be done, for want of a better descriptive term.

That's what we're talking about now here today. We're talking about the hazard communication standard, meaning, in all simplicity, that if a worker is dealing with some kind of a chemical or some kind of a substance that would be, basically and fundamentally, hazardous, this standard—this regulation—that OSHA has now adopted says that certain things have to be done.

You have to notify them; you have to mark some of the barrels; you have what they call a material data sheet, and that's nothing more than an explanation as to what is in that substance; all for the purpose, directly or indirectly, of hopefully protecting a man that's handling it, so that he wouldn't become sterile—it may be a man or a woman—that he wouldn't develop some type of a cancer disease if the chemical being used or a process in manufacturing does cause cancer, and things of that nature.

You should remember that we have some 50,000 chemicals that are known as dangerous, and every year 5,000 new ones come on the scene, and where it's going to end nobody knows.

The question involved is, Is the standard that's now been adopted some 15 years after we've passed this statute—is it sufficient?

Usually, as in all cases here in Congress, you have two conflicting positions. Labor, as such, and some businesses, probably, take one position; and businesses, as a general rule, and the chemical industry, generally—they have had many associations—take another position.

In some aspects, they're conflicting, but in other aspects they aren't, because both sides, so to speak, I think have the common interests of the worker at heart, because remember, if a worker becomes sick, it costs industry money; they have to pay Workmen's Comp if they're injured, and things of that nature.

So it's beneficial to both the companies and the manufacturers to put in some kind of a safety standard and also for labor, because they represent people, and they make an attempt as an organization to try to protect those that belong to their organization.

So, in all simplicity, that's just about what the situation is.

What are we doing today? We have two representatives before us. Mr. Karrh is the vice president of the safety, health, and environmental affairs department—I presume—of Du Pont. That's a big chemical manufacturing concern.

He is testifying here on behalf of the Chemical Manufacturers Association—CMA—and he's over here trying to tell us in the committee what he thinks about the standard, about its being sufficient, whether it's a good standard, is it working, what they do as a chemical industry, what they advocate, what educational progress they're making. That's what he's for.

Months back, over a series of hearings, we've had the other aspect, where labor and other representatives came before us and said it's insufficient, these so-called material data sheets aren't

working, there's not enough on them, a man can't read them, he can't understand them.

So that sets up the conflict—which the committee is trying to resolve.

We also have with us here Mr. Evans, who has just finished, and he's the director of environmental health for the Monsanto Co.

So these gentlemen are well schooled; they have the information at their fingertips. They have come here at their own expense, come before us to spread on the record so the other members who aren't here—including ourselves—would have information as they see it and as they perceive it. That's basically what they're doing.

We're here because we don't have the expertise. We handle many other matters, which I very hurriedly mentioned at the outset, and these men are almost indispensible—and women; there are some very studious and expert women in this field.

We make an attempt to glean from what we hear, and to compare it with other evidence we receive, and then we sit down and analyze it, and then as a committee we're in a position—this is the last hearing—after we've heard all these hearings, it's all in typewritten form, in booklet-printed form, ready for the public to read, us to study, and then we make a determination—again, in all simplicity—as to whether or not this standard is sufficient or isn't, and how we would legislate if we decide to do it, what form it would take, and what we would do, could we enforce it, and things of that nature.

So that's just how this works. This is almost representative of how every hearing that you'd be exposed to works, and this is fundamentally the way legislation finds its way before the House of Representatives and ultimately on its route over to the Senate and then on the President's desk. It starts with these hearings.

I'm going to conclude, and maybe some of my colleagues here—I've talked too long maybe, but I thought you should have that explanation.

Before I turn it over to my colleagues, let me say this to our young people. You may or may not be interested in what we're doing. It may be complicated. I've tried to simplify it for you. I want you to know that it's probably going to be your generation that's going to have the problem in a greater form than we have it.

As I mentioned before, 5,000 new chemicals and substances come on line every year, and those are just some that are identified.

For example, we had an instance—I don't want to allude to it in a detrimental fashion, but, just to show you, we had a kepone issue that occurred, and it ended up that kepone was a poisonous pesticide that found its way into the St. James River, and I don't think the fish today are allowed to be eaten—I'm pretty sure the ban is still on—because they were manufacturing this pesticide in a little garage, and the waste was finding its way down into the river, and it got entangled and enmeshed and became part of the substructure in the river—became part of the mud and things like that. The fish ate the growing plants from the bottom, and they found a substantial amount of chemicals in the fish flesh, and they banned the fishing and eating of those fish.

Again, it's just one small example as to just how big the problem can be.

When I say that your generation is probably going to face even more gargantuan problems, I mean that things are developing so rapidly that there is a serious question as to whether or not we can keep abreast, at most. We haven't even attacked the old substances.

Now, I want to conclude, and I'll turn this over to my colleagues.

I feel confident that we have had complete cooperation from industry in particular, labor, and other interested parties, and you may ask who they would be. They would be lawyers that represent claimants; they'd be claimants themselves; we've had them from the political spectrum; there are a lot of people in the country interested in what we're doing here.

I believe that we've made great strides. Now, the sufficiency of the strides is open to debate. Some people say we're moving too slow. Others may say we're moving too fast.

I conclude that there's authenticity on both sides. Everybody wants to find a solution, meaning that when a worker handles a barrel—it might be your father, or your uncle, or anybody in your family, direct or indirect—may be exposed to these dangerous and hazardous substances.

If they are handling it at work, they bring it home on their clothes. It's very important. It may brush off and become part of the atmosphere, and, before you know it, a 2-year-old child is breathing it. It's not that silly of a concept; it's very real.

So, with all of the problems involved, such as workmen's compensation, sickness, lost time—the general health of the Nation—all those things, plus the very humanitarian aspect of it, everybody has a right to live as long as the good Lord gave them a right to live, or at least an opportunity to live.

We take a look at it and say, hey, if a man is making a wage and working at labor, he has as much a right to reach his full potential and live a full life as the President of the United States. That's the fundamental philosophy of this country, and that's what we try to do in so many words here on this committee.

I've talked too long. At this time, I'll talk to Mr. Hayes, and maybe he'll correct me in some of my observations.

Mr. HAYES. Not really.

I want to thank you, Mr. Chairman, and apologize, too, for my tardiness this morning. I had to respond, as you well know, to the call for a quorum for the caucus meeting this morning, which still hadn't taken place when I left to come here.

But I am interested, as are other members of this committee, and I'm sure you are, as representatives of management, in health and safety.

I got my grassroots training as a worker. I graduated into the leadership of a union. I came out of an industry where they use knives, and the injury rate was very high in the meat-packing industry. I've been very concerned about some laxity in the safety rules and regulations.

I've also been concerned about the enforcement area when we got the rules and regulations. OSHA, I think, has been a godsend for the working people, but I think it's also furnished certain protections to management. It's somewhat a haven for lawyers to some extent; there's no question about it.

But I'm sorry I wasn't here to hear you gentlemen's testimony, but I shall study and read it, and I'm sure it will be helpful to me in giving me some insight into your side of the problem at least.

Thank you very much.

Dr. KARRH. We hope so, Mr. Hayes.

Mr. GAYDOS. Mr. Chandler, you're from the great State of Washington. He sometimes claims that, being the minority, we outnumber him, but, believe me, he holds his own, and he has no problem.

We do have more Democrats than Republicans on the subcommittee and the full committee because, as a whole, as I explained, there are more Democrats in the House of Representatives than there are Republicans. So that's how the ratio breaks down.

So at this time, Rod, I'd like to call upon you to maybe make some corrections. I might have overstated a problem; I don't know.

Mr. CHANDLER. I'd just like to welcome these students as well and tell them, this is a rare treat for you, to have the chairman pause in a hearing and explain to you what's going on. I hope you enjoyed it, and I hope you benefit from it.

He also gives the teacher a test to tell whether you were listening or not. So I know you'll be looking forward to that. [Laughter.]

Mr. GAYDOS. Thank you very much, Rod.

Which group do we have here? Where is it from? Can someone stand up and be a spokesman?

A VOICE. Bank Street School, New York City.

Mr. GAYDOS. New York City?

Leo Zeferetti from New York was on the committee at one time.

Mr. CHANDLER. Last week, my seventh grade daughter was in New York on a field trip.

Mr. GAYDOS. Mr. Biaggi, too, also from New York, served on this committee, if I remember correctly.

I'm trying to think of some of the New Yorkers we've had. We've had great representation from the great State of New York here—very active men, leaders in their own right. It has been a great State. We're getting a lot of Republicans from New York too, so we can't say that we're prejudiced on this side, can we, Mr. Hayes?

Mr. HAYES. Not really.

Mr. GAYDOS. We've had some great Republican leaders.

Mr. HAYES. We have; no question about it.

Mr. GAYDOS. All right. I'd like to ask some questions.

In previous hearings, we've heard from labor representatives who expressed their concern about the material safety data sheets—that sheet that's made up of explanatory material, identifying the chemicals and stating what they consist of, and how dangerous they are, and how they react to water, and things like that.

They're questioning the amount and the quality of the information presented on those sheets, the trade secrets provision of the standard and the way some information is withheld from workers, and the deterrent efficacy of employer-developed training programs. All those things were raised by prior testimony. Could you respond to some of those?

If I may hurriedly pick a few out, what about trade secrets? Do you have any problems with that—that that material data sheet exposes what's in there and the company that owes its very existence to those chemicals—someone else comes along and picks it up

easily and then duplicates it, and things like that? Is there any substance to the complaint by the labor leaders along those lines?

Dr. KARRH. May I ask Mr. Evans to respond to that?

Mr. EVANS. Mr. Chairman, if I may, I'd like to answer that.

I really think any criticism of the standards provision for trade secrets at this point and the performance of the industry is a little premature. We're allowed until November 25 of this year to complete the preparation of our material safety data sheets.

Frankly, as I said to you back in 1981, when we were showing you what we did before regulation, I think I said that Monsanto had, some of the best material safety data sheets on the market. If that's true, I think we're still working about as hard as anybody left in the business, because we have a massive program under way to upgrade every single material safety data sheet we have in order to achieve compliance with the new standard.

As far as trade secrets are concerned, Lou Fernandez, who was our chairman of the board of directors at Monsanto and also chairman of CMA, urged all of the membership of CMA to reassess their proprietary claims for trade secrets—open up and reduce the amount of claims that were made.

I know we're doing that in our own company. I can't count them all yet, because we're still doing them, and we'll be doing them for the rest of this year, but where we have proprietary concerns and withhold only the chemical identity—chemical formula—no other information will be withheld on the material safety data sheet, Mr. Chairman.

Every bit of information necessary to protect an employee's health and safety, for monitoring, protective equipment, emergency procedures—the like—will all be included. The generic family of the chemical will be included.

Just simply the chemical formula in those rare instances where we beg the understanding, you might say, for our reluctance to withhold the chemical identity, to protect the financial stability and the economic employment stability of our personnel. They will be very rare exceptions.

So judge us in the future while we complete our reassessment for now.

Dr. KARRH. Mr. Chairman, could I also elaborate on that a little bit on the comment that you probably have heard from the labor unions regarding material safety data sheets.

I think we would all agree that it's true that, today and in the past, the material safety data sheets may not have contained as much information as they should have, and that would be a valid criticism.

But you have to recognize that MSDS's in the past were a voluntary effort on the part of industry, and there was not a national standard that told us exactly what had to be in there.

That's the advantage to the hazard communication standard that OSHA has come out with now. It does give us a national guideline that tells us what the MSDS's have to contain, what type of material has to be on there, so that it does give us a minimum standard for the material safety data sheet so that we can comply with that.

The hazard communication standard is requiring a tremendous amount of effort by the chemical industry, as Mr. Evans said, in order to comply with it.

My company, Du Pont, and Mr. Evans' company, Monsanto, have been leaders in developing the MSDS's in the past, but even in our case, we're having to go far beyond what we have done in the past in order to comply with the hazard communication standard, and we think that this is very helpful to both the chemical producing industry, the chemical using industry, and to the employees of both groups.

Mr. GAYDOS. The first thing that strikes me is this. I would hope that you wouldn't want our particular listeners today to misinterpret your position when you say that, since there were no regulations before, you weren't doing something. I know the chemical industry is more responsible than that. Even though you had no regulations, you were doing things before that.

Dr. KARRH. I hope you didn't interpret my——

Mr. GAYDOS. There might be a question as to whether you're doing enough.

Dr. KARRH. I hope you didn't interpret my comments to say we were not. What I was trying to say was that we were doing it as a voluntary effort, but we didn't have a standard by which to go. We had to develop our own standards.

Mr. GAYDOS. All right. Let me ask this practical question. Would you have concern about small manufacturers?

Usually the large associations are made up of membership from larger manufacturers and more moneyed interests. What about the small mom-and-pop operation—for instance, a little garage somewhere on the outskirts of Philadelphia, or Pittsburgh, or up in New York somewhere, where they are repackaging something, getting something in drum form, putting it in 5-gallon cans, or getting something in dry form and repackaging it in bags of some sort?

We've found that most of our problems and the greater dangers always seem to be in those mom-and-pop operations and the medium-type operations—not so much a big 5,000-man operation.

Could you address yourself to that distinction, if it is one? I don't know; there might not be one.

Mr. EVANS. Well, if we qualify as a larger company versus a smaller company——

Mr. GAYDOS. I would think you do.

Mr. EVANS. Well, it depends on whom I'm sitting with.

Mr. GAYDOS. If you move aside a little way——

Mr. EVANS. We are primarily the manufacturers of 90 percent, possibly, of the tonnage of chemicals in the country, and we very definitely want every small operation in the country, be it a mom-and-pop shop or a very small chemical or processing company, to have the advantage and availability of our material safety data sheet health and safety information. It's to their advantage; it's to our advantage; it's to the community's advantage.

As we have said, we're perfectly willing to make available to people in the community the very same information we make available to our employees, Mr. Chairman, and that is all of the information about every substance we make and every facility we have.

Dr. KARRH. Another part of that also is that the larger manufacturers, such as what we represent—our two companies—can help the smaller manufacturers by setting the example of the types of MSDS's and the types of data that need to be developed.

We have found in the past in many of the programs that we have conducted throughout the industry that, as the larger companies put in programs to address specific issues, this is very helpful to the smaller companies, to be able to benefit from what has already been done by the larger companies and bring up the standard throughout the industry to a certain level.

Mr. EVANS. We taught Du Pont everything they know, sir.

Mr. GAYDOS. Well, I was very impressed in your testimony when you talked about the emergency numbers you have and the new approach as to making information available.

I remember in my hometown we had a packaging firm. I won't mention the name, but they used to take toluene and benzoil and things like that, and they'd repackage it. They were located right across from a coke plant. So you know that those chemicals were there and they were repackaging it.

One day they had a fire, and the local volunteer fire company—it wasn't a professional fire company; it was voluntary; it wasn't full-time—they came to the fire, and they started putting water on it, and that thing just exploded, and all types of dangerous gases resulted, and some people were almost asphyxiated; they had one or two deaths involved—things of that nature.

That's why it seems to me that it's such a refreshing situation to experience now that you're doing these things voluntarily, making emergency numbers available, so that if a fire occurs or one of your transportation vehicles turns over, you can get on the phone, call a particular number, and get a description as to how to fight that fire or what to do, how dangerous it is, or what kind of gases emanate from it, and will it kill, and what is the hazardous aspect of it.

Of course, you know, we're getting into another committee's jurisdiction when we're talking about that, but basically it's all tied up, because we do have workers—a truck driver, you know, working for somebody on that truck is exposed to that substance. So we have those overlapping jurisdictions.

Dr. KARRH. We're very proud of the two initiatives that we announced last month that I mentioned—the CAER and the NCRIC initiatives—and we feel that this will go a long way toward helping to alleviate any of the concerns but also any of the potential problems that people could encounter in trying to handle our products.

We've had the Chemtrec, as I mentioned. The Chemical Transportation Emergency Response Center has been in existence now for 14 years, where, in chemical transportation emergencies, people could call in and get information and get assistance in handling that chemical transportation emergency.

Now that's being expanded to where it doesn't have to be a transportation emergency for people to be able to call in and get the information that they feel they need.

Another aspect of it is the first responder training, where there have been some voluntary efforts. Shelby County, TN, is a good example, where industry has taken it upon itself to help train the

fire department, civil defense, and other emergency response people.

But now, through our CAER initiative, we are extending that throughout the United States, and, in fact, we put together this notebook—I just happened to bring a copy with me to show you today—on chemical awareness and emergency response. It's a "how to" workbook that an area's firefighters and firefighters from other geographic areas can get this workbook to learn how to develop this.

We're asking our plant managers to take the initiative in developing these programs and then training the emergency responders so they know how to handle chemical emergencies.

Mr. GAYDOS. Mr. Karrh, do you or Mr. Evans share our concern with your workmen's compensation cases as to the possibility of their becoming enlarged as far as money involved and through the various State statutes, and seriousness, and the longevity of the claim—you know, how long they are going to be off from work?

Do you share our concern that the workmen's compensation aspect of the question involved in this entire spectrum of these hearings—that it's very dangerous, it could be almost confiscatory, and that it's one of the rising costs that has to be explained or met some way? Do you share that concern?

Dr. KARRH. I don't think, from my company's perspective, we share the concern that the worker's compensation system is in any danger of reaching the point where it can no longer be afforded, if that's the question you're asking.

We feel that if we cause some worker to suffer some problem as a result of the job, and they're entitled to worker's compensation, that it should be paid, irrespective of what level of payment the worker's compensation system determines should be made, and that has been our policy for a long time.

Mr. GAYDOS. What's your experience the last 10 years? Have your compensation cases increased, decreased, or remained stable?

Dr. KARRH. Our compensation cases for every work-related condition except one have remained stable. We have one condition that our worker's compensation costs have increased rather substantially in the last 4 or 5 years, and that's because of asbestos-related conditions.

We, as a company, undertook in 1979 a very proactive program to make sure that any of our workers who may have been exposed to asbestos and that we determined had any asbestos-related medical conditions, that we appropriately compensated them, that we got them evaluated medically, and did what was best for the worker.

So, as a result of our own self-initiated program, our compensation costs for asbestos-related conditions have risen, but every other condition within the company has remained about the same on a cost basis as it has in the past.

Mr. GAYDOS. You aren't even approaching the mass claims that Johns Manville is experiencing, are you?

Dr. KARRH. No, sir, we're not. We've had some 200-plus cases since 1979.

Mr. EVANS. I don't have the figures with me, Mr. Chairman, but I know, although concerned certainly about workmen's compensation costs, we have had no unusual trends. It's been fairly stable.

It's been almost—if you analyze our company by the plant locations, some go up, some come down, but we've had no major trends one way or another, and I certainly support everything Dr. Karrh has said about supporting the program.

An employee who is injured on the job, for whatever reason, certainly deserves the compensation that the program allows.

Mr. GAYDOS. Maybe through all this hullabaloo that has occurred and all the accusations and recriminations and all that stuff, maybe OSHA is not so bad. Maybe it's not going to run industry out of the country, like was claimed at one time.

Dr. KARRH. Our position is that OSHA is not bad. Our position is that OSHA——

Mr. GAYDOS. I've got you on the record on that now.

Dr. KARRH. I understand that, and I said it in 1981 also.

Our position is that OSHA has done a good job and is doing a good job, and we certainly support the activities that OSHA has.

Mr. GAYDOS. Would you like to see Eula Bingham come back?

Dr. KARRH. There have been some problems in the past with OSHA. I now serve on OSHA's advisory committee—on the National Advisory Committee on Occupational Safety and Health—and have had the opportunity to work with OSHA very closely now for the last 4 years.

I had the opportunity in Dr. Bingham's administration with OSHA to work very closely, and we feel that OSHA is an agency that is needed, has done a good job, is doing a good job, and we have worked with it and are hoping it will continue to do a good job.

Mr. GAYDOS. Let me ask the one question instead of me asking all these other questions. We've had suggestions before the committee that it's not the ingredients in the substance that matters as much as the proportions of that ingredient.

The question was raised, would it be possible in that sense to list the hazardous ingredients in a substance without stating the quantities? That might provide the necessary information for worker safety and still maintain the confidentiality of your trade secret.

Mr. EVANS. If I—I think I understand your question, Mr. Chairman. We do list the ingredients of mixtures on our material safety data sheets.

The OSHA standard requires that you list the ingredients that contribute to the hazardous nature of a mixture if you have evaluated and tested that mixture as a whole.

If not, you are required to list every ingredient that is contained, that is considered a hazardous substance, in excess of 1 percent or one-tenth of 1 percent if it's a potential, possible carcinogen.

So I think the standard as it is right now is quite comprehensive and requires inclusion of all ingredient information on the material safety data sheets.

Mr. GAYDOS. Well, I don't want to get into the fine arguments that have been directed toward the standard, but not all the ingredients must be listed on the material safety data sheet. Is that correct?

Mr. EVANS. No, sir.

Mr. GAYDOS. Every ingredient has to be listed?

Mr. EVANS. Of a mixture, if the mixture has not been evaluated and tested as a whole, and that means you look through toxicology testing, whatever kind of laboratory testing procedures you go through on a substance. If you have not done that for the chemical in its entirety, then you are required by the standard to list every hazardous ingredient contained in your mixture.

Mr. GAYDOS. Yes, but those are the ones that have been determined to be hazardous and determined to be a stimulant to some cancer form. There are a lot of them for which maybe the evaluation hasn't been done. We have 5,000 new chemicals coming aboard.

Mr. EVANS. I think today the laws—and I'm not a TSCA expert with EPA, but new chemicals don't get on the market today unless they've been through rigorous testing procedures and programs and approved by the EPA.

But as far as our substances are concerned or the OSHA standard, the standard requires that if there is one statistically significant scientific result in the record that shows that a substance is hazardous and injurious to health, it is, by definition of the standard, hazardous.

OSHA covers more hazardous substances than any law or regulation in the country in any State today.

Mr. GAYDOS. If that is the case, why are the companies so reluctant to list everything that's in there?

Mr. EVANS. I'm not sure I understand the reluctance, Mr. Chairman. We're required to list them. We are listing them.

Dr. KARRH. Let me elaborate on that, if I may, Mr. Chairman. One of the things that we have found is that many mixtures and many compounds will have several different materials in there.

It's our opinion that if you have two or three hazardous materials, and then you have five or six inert materials, that you clutter up a label, or you clutter up an MSDS, by listing every material that's in there even if they don't pose a hazard.

So we feel that hazardous materials—materials that either in their own right or in their proportion in the mixture—that may present a hazard to human health or the environment should be listed and that hazards should be listed, but we shouldn't have to make a laundry list of things that really don't present any hazard at all, because then it detracts from the hazardous materials that you are listing.

Mr. GAYDOS. So you are hanging your hat on the fact that it is designated hazardous, and that's good enough for you.

Dr. KARRH. We are hanging our hat on the fact that it has been demonstrated to be hazardous, and, as Mr. Evans mentioned, under the Toxic Substances Control Act you have to now give a premanufacturing notice—or PMN—90 days prior to intended manufacture of a compound, and EPA at that time then determines whether or not there are sufficient toxicological data on that material, and, if there are not, you may be required to develop those data before you can begin manufacturing that compound, so that you then determine what the hazards of it may be.

So the likelihood of a new material coming on the marketplace now that has not been adequately tested to determine what the hazards are is almost nil because of the overlapping laws that we have.

Mr. EVANS. And all of the chemicals that have been on the market for years prior to those EPA regulations Dr. Karrh referred to, if they have not been so tested, then, for all the hazardous substances contained, you will find those listed in detail on material safety data sheets.

Mr. GAYDOS. And you have no concern about the smaller manufacturers as far as their ability to determine the toxicity of a substance at times?

Mr. EVANS. If they are creating new chemicals on their own without adequate professional staff, I think they have quite a problem facing them. I think they probably would have to hire the expertise or whatever, but hopefully we're making most of the chemicals and they can use our information.

Dr. KARRH. They also, though, if they were creating something new, would come under the provisions of the Toxic Substances Control Act on the premanufacturing notice and would come under the same provisions that we would as far as their ability to manufacture material.

Mr. EVANS. Unless they have been on the market for over 10 years.

Mr. GAYDOS. Let me call on Mr. Chandler.

Mr. CHANDLER. Will CMA members be in compliance with the Federal standard when it goes into effect in the fall of 1985?

Mr. EVANS. It's difficult to speak for all companies, but I can assure you, Mr. Chandler, that we're going to require and need every day between now and November 25 this year to achieve compliance.

It's a myth that we're in compliance now and were in compliance before the standard was promulgated.

We've always had, I think, good health and safety training programs, but we've never been required, as this standard requires us, to write down our unusual, nonrepetitive procedures, our emergency procedures, and necessarily our industrial hygiene programs, how we communicate, how we label, how we make material safety data sheets.

All of this will require a discipline and an organization that will make us better, but it's no easy task to comply, and certainly if my attorneys were sitting next to me, they'd tell me to just shut up and say yes.

Dr. KARRH. I think the critics of the standard, Mr. Chandler, have really not understood exactly what the standard calls for, because even the companies that are more sophisticated and have staff to handle things like this are having a difficult time being able to pull together the massive amounts of data that are going to be required to be in compliance.

Our companies represent companies that are really having to take people off jobs and assign several people to do nothing but put together the data that are going to be required to comply with the standard.

Mr. CHANDLER. Another concern that has been addressed is that of training and the adequacy of training. I'd appreciate both of your comments on that.

Mr. EVANS. As I indicated, I like to think the reason that we are No. 1 in the manufacturing industry in safety performance is because we have had good health and safety training programs.

I firmly believe, though, that this standard will make our training programs much better. It will organize them. It will force them to be written.

For our particular compliance program—I've developed a manual, the last page of which for each plant to use is a checklist, a training checklist, with 19 items that, if each employee in our plant has not been fully informed of what that particular feature of the standard is in the program, he has not been adequately trained.

So it's requiring a discipline, and, yes, I think our programs will get better, and I think performance, as I said, in our company as well as others throughout the country will improve as a result.

Dr. KARRH. Our feeling is that training is by far the most important part of the hazard communication standard in practically communicating hazards to our employees and to the employees of our customers and to our consumers.

Training is much more important to us than is the MSDS, because the MSDS is not the panacea that some have held it out to be, nor is the label.

But the training in what the hazards are, what protective measures are in place to prevent adverse health effects, and what the person can do themselves to prevent adverse health effects are much more important. The MSDS and the label are just backups to the training.

Mr. CHANDLER. Mr. Evans, you commented in your prepared testimony, about notification of the appropriate authorities in the community, especially where you're dealing with fire departments and other emergency personnel. The line just above that, said, "We endorse a uniform Federal standard." Then you talk about the community issue.

I'm wondering if there's a jurisdictional problem that you encounter with this notification of the community, because it isn't OSHA that requires the notification of the community. That's essentially a workplace law.

If that's something that we in the Congress need to address so that we have uniformity and a standard jurisdictionally from the Federal Government on this question——

Mr. EVANS. That is one of the features of the standard that is currently under litigation.

The first indication we've had of a reaction from a court was the District Court in New Jersey that ruled that the Federal standard did preempt the State standard. So that indicates that if the challenge in the Third Circuit that's currently waiting for a decision comes with the same result, then I would assume the court has settled that issue. The court also stated that the community RTK provision was preempted.

So our position is that that is the case, and if the community needs that information, we'll make it available to them anyway.

But the uniformity that we plead for is the Federal preemption of the standard to allow the material safety data sheet, if that is to be the vehicle of information to the community, not to have 50 States, 300 communities, come in with different laws requiring different kinds of fact sheets, if you will, to provide this information to the community.

There is the standard. The existing material safety data sheet is about as complete as it can be. It's not just a sheet any more; it's almost a pamphlet.

Mr. GAYDOS. Would you yield to me?

Mr. CHANDLER. Of course.

Mr. GAYDOS. Why don't you take the most stringent one, comply, and forget about the rest?

Mr. EVANS. Mr. Chairman, which is the most stringent? As far as I'm concerned, the Federal standard is. It's a myth. Believe me, it's a myth.

I've heard the New Jersey law was considered to be the toughest of all of the State laws. OSHA wrote them a two-page letter explaining why it didn't measure up and wouldn't be accepted if it were a State plan.

Mr. GAYDOS. I'm telling you this. OSHA is really going to be solidified here now, and we're having a lot of supporters.

Dr. KARRH. Mr. Chairman, to follow up a little bit on what Mr. Evans was saying, with the Federal preemption of other standards so that we have a unified standard, and with the voluntary initiative that we have with the community awareness and emergency response, where the community has the right to know what materials are being handled in plant sites and where it is being recommended that communities be given MSDS type of data, we feel that these two may make it not necessary to have any type of Federal legislation.

Our CAER workbook that I showed you earlier has been a best seller. I think we have already sent out some 2,000 copies, and we have more now being printed and have a backlog of orders, because there has been a pent up demand or need for that that we're now satisfying.

Mr. CHANDLER. Do you feel that the hazard determinations are too arbitrary under the current standard—is it specific enough in hazard determination?

Mr. EVANS. I think the expression used to define the standard is that it is a performance standard, Mr. Chandler. It tells you what is needed. It tells you where you've got to be—the goal you must achieve—but it does not tell you how to do it. But, whatever you do, you must be able to support and justify your action.

I think one of the real strengths of the standard—one of the most comprehensive features of the standard—is that it requires manufacturers to do that—make a rapid evaluation.

If you take lists, as some State laws and others suggest, to use for that criterion of a hazardous substance, there's no list in the world that can cover the substance you're going to make tomorrow or that you have made in the past that are proprietary, or require mixtures, and so forth.

So this requires that you, if it hadn't been so classified in the past, justify your actions in the future by what you do now.

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It's tough; it's a tough standard evaluation program, but I think it's a good one.

Mr. CHANDLER. Thank you, Mr. Chairman.

Mr. GAYDOS. Mr. Hayes.

Mr. HAYES. I don't think I have any questions, Mr. Chairman—one out of curiosity, I guess, which doesn't mean too much in terms of substance.

I was just wondering, in your prepared statement from the Chemical Manufacturers Association, you say, "In 1983 CMA released a report entitled 'An Industry Survey Of Chemical Company Activities To Reduce Unreasonable Risk.'"

What is the line of demarcation between reasonable and unreasonable when it comes to risk?

Dr. KARRH. This is a copy of that report, and I'll have to admit, Mr. Hayes, I have not read it thoroughly enough that I can answer your question specifically, but we will be glad to make a copy of this available to the subcommittee, if you'd like, so you can see exactly what the results of that survey show.

Mr. HAYES. I saw a little further on in the report where Du Pont, I guess it is, which is one of the three companies that helped to compile this report—they said, "Product management is a process of hazards control—of recognizing and assessing the hazards associated with the development, handling, and use of any product and then developing methods of controlling those hazards so that no one is knowingly exposed to any risk associated with its use."

Then they say, "The bottom line is unless and until a product can be manufactured, handled, and used safely, we will not produce it. All occupational injuries and illnesses can be prevented; it is our goal to do so."

So I wondered—in the first part, when you talked about unreasonable risk, you make such a definitive statement there—at least Du Pont does—as a bottom line in their goal—to make sure that they prevent all occupational injuries and illnesses. Is that a contradiction?

Dr. KARRH. No, sir. No, sir, it's not.

Our philosophy is, as a company, that all occupational illnesses and occupational injuries can be prevented, and we work toward that end at all times.

That doesn't mean that we're always successful, but it is our philosophy, and we have programs in place to do that so that if our programs are followed, we will prevent all occupational illnesses and injuries.

We also have a corporate policy statement that has been endorsed by our executive committee, which is the operating committee of the company, that we won't make a product unless we can do so in a safe and environmentally sound manner. We won't make, handle, use, or transport a product unless we can do so in a safe and environmentally sound manner.

That means that before we start the manufacture or the use of a product, we have to develop all the toxicological data that are available on that product and determine for ourselves whether or not that product can be made, or handled, or used safely in the manner in which it is intended to be made, handled, or used. If we determine that it cannot be, then we won't make, handle, or use it.

If we determine, though, that it can be but it requires special controls, such as engineering controls, personal protective equipment, or some type of special handling mechanism, then we will put those mechanisms in place prior to beginning to make, handle, or use that product, so that we can assure ourselves that we are, to the extent at all possible, preventing any potential for adverse health effects or injury from that product.

Mr. HAYES. You know, the charge is—and I don't know if it has any substance or not—that the people who head the big companies, particularly chemical companies, who make the final decisions—the ones who exercise veto power over regulations and safety rules—they are insulated by technicians who protect them when something happens. You never get to really discuss things with people who are the ones who make the decisions.

The bottom line is, you fellows do your jobs well, in your capacity, but the people who really make the decisions, as some charge—and I know we did this at the time when I was with labor. We never really got to see the people who are the ones who make the decision if some catastrophe happens—a plant blows up, some workers get killed.

The decision to reopen that plant while a study may be going on—still going on—to determine what caused it is made not by you technicians or you people who are doctors or things of that sort, but by the people who actually are the ones who are the owners of that establishment.

Dr. KARRH. I think, Mr. Hayes, it goes much beyond that, though.

My job is vice president with responsibility for safety, health, and environmental affairs for Du Pont Co. In that capacity, I report directly to the executive vice president of the company.

My job is to make sure that what we are doing in our operations is not presenting an undue risk of injury, illness, or environmental contamination, and I would lose my job quicker for not making our chairman of the board or the executive vice president to whom I report aware of some health or safety or environmental factor than I would not for covering something up or for proceeding with something like that.

My job is to be sort of the eyes and ears of top management and make sure that they know what is going on, so that when the decisions are made, they are made as fully informed decisions.

One of my associates has given me the information that you asked for earlier on the unreasonable risk, and the definition of "unreasonable risk" that we use in the report that I showed you is the definition that EPA has used in their Toxic Substances Control Act standard.

Mr. HAYES. Thank you. No further questions.

Mr. EVANS. Mr. Hayes, I'd just like to further state, too, that, in my company, no one in top management, as you indicate, would make a decision to open or close any facility without the recommendations of those that work for them down the line.

Although I am not an M.D., I have the responsibility for environmental health at Monsanto for the industrial hygiene, toxicology, and the like. But any industrial hygienist in our company is a representative of the worker. He is responsible—he feels responsible

for the workers' health, and if there was an unsafe condition in a plant that you characterized, and he recommended that that plant not start up, that plant would not start up.

Mr. HAYES. I just noticed, the chemical company where the great catastrophe occurred in India has decided to start production here in Virginia, I think, before the report is completed in India.

I don't expect you to respond, but this caught my attention.

Mr. GAYDOS. Let me ask you, does Union Carbide belong to CMA?

Dr. KARRH. Yes, sir. Union Carbide does belong to CMA, and Union Carbide is one of the larger chemical companies.

I did have the opportunity to testify before Congressman Waxman as a result of the post-Bhopal hearings that he held I guess the month before last now, and the opportunity to hear Union Carbide's discussion of their plans to reopen the MIC plant in Institute, WV.

They have extensively changed the manufacturing process at that plant such that they now have additional safeguards from what they had prior to the Bhopal catastrophe.

While it's true that the complete final report is not in on what exactly caused the Bhopal disaster, Union Carbide does have sufficient information from it that they feel that they know most of the cause for it such that they can prevent that from happening at their Institute plant.

Mr. GAYDOS. You have a safety program developed by the association. How do you force your participating members to adopt it or to practice it, or is it voluntary on their part? Can you give me a little idea?

Dr. KARRH. With any association, if there is a particular safety philosophy or safety program that's going to be put forward, this will come to the executive committee first for consideration. The executive committee will then take it to the board of directors. The board of directors—if they approve it, then it becomes association policy.

There's no policing capability within the association, but it is certainly the policy, and the program would be disseminated to the association members, and they would be strongly encouraged to put the program in place and then would be offered whatever assistance they needed to have to put the program in place.

Mr. GAYDOS. In other words, what you're saying is it's a suggestive sort of thing.

Dr. KARRH. Strongly recommended, I guess, may be the better words to use.

Mr. GAYDOS. Is that the same as your public awareness program that you've developed? Is that the same type of enforcement?

You have no internal policing ability within an association, do you?

Dr. KARRH. We have no internal policing capability at all, but the advantage is that in most areas in which there are chemical plants located, there are usually representative plants of the larger companies that are very interested in the Community Awareness Program that I talked about, and their plant managers and plant managers of smaller companies are also the ones that are responsible for carrying this out.

Mr. GAYDOS. We had Union Carbide before this committee, and the situation described in there was horrible. They didn't even have a whistle that would warn the residents or any other people that lived in the vicinity.

They had leaks of very dangerous substances. They had leaks that occurred, and they would just go on unattended to, and it would just be a matter of acceptance. I was very disappointed in hearing that testimony, exceptionally so.

We had both the union and management in. We just didn't go to one or the other, you know. We had union people themselves, and I don't want to judge an individual witness, but it seemed to me that the witness wasn't that accurate in stating the position without it obviously revealing that there was some attempt, directly or indirectly, or unconsciously, to cover things up and to color the real situation as it existed. That was my interpretation of the testimony.

The reason I'm being so careful what I'm saying is that there's an awful lot of aftermath that may—anyhow, I was very disappointed.

Dr. KARRH. One thing I could say, if you don't mind, is, I can't speak for Union Carbide naturally, because I'm here representing CMA and Du Pont.

Mr. GAYDOS. I understand that.

Dr. KARRH. But all of us felt—all chemical companies, including Du Pont, felt that if we took appropriate safeguards to protect the health and safety of our employees on the plant, that we would be taking the same safeguards that would then protect the community, because of our workers on the plant being more closely associated with the processes and more likely to be exposed to the materials that would be coming out of the process.

So we directed all of our control measures to the plant and to our own employees.

The Bhopal tragedy certainly taught the whole industry a lesson that we're in the process of making sure we take appropriate steps to correct, and Du Pont learned a lot from that, as well as did the rest of the chemical industry.

We now recognize that being able to protect our own employees on the plant, even though the likelihood of another Bhopal-type catastrophe occurring is very slight, we're having to extend our protective measures now out into the community. That's largely the reason that we've taken these initiatives.

Mr. GAYDOS. I have to be the first to admit that we have no jurisdiction over community residents here in this committee; we are talking about worker safety; but, of course, they go hand in hand at times, and one means the same as the other.

But I was more concerned about the fact—here's the problem that I have, if it is a problem. You have an association. I wouldn't even ask you what the budget is, because it would have to be substantial. You have professionals.

But many times we've discovered as committees, these associations are paper tigers. They exist on paper. They have professionals that gather, and they do really nice things, you know; and they do it at the convenience of the participating members; and when they go so far, then they stop; and there's just no practical way of enforcing whatever they do come up with. When they do make a pro-

gram, it's advisory at best, and things of that nature. I don't think the industry would be doing their cause any good if that's the case.

I'm not accusing you or your association of falling into that category, but I'm just saying that we've found that to be the case many, many times, and that's why I pointedly asked you whether or not Union Carbide belonged to your association, because we found such disturbing evidence when they testified before us.

I could have sat there and really carved some shanks up with the testimony given, but that wasn't the purpose of the hearing. It just bothers me that you would have an association pay that much money to keep it in being and then, again, end up with no practical protection or effectiveness—no deterrent efficacy, as it were.

Dr. KARRH. What we have found is that the programs that we develop are programs that are for the good of the industry as well as the good of society and that the companies themselves are quite anxious to participate in these programs.

For instance, the CAER initiative—the Community Awareness and Emergency Response—was only announced six weeks ago, and already two-thirds of the CMA member companies have signed up to participate in the CAER Program, meaning that everywhere they have a plant, their plant manager is going to be a participant in putting in a Community Awareness and Emergency Response plan, and we have some 160-plus members.

Mr. GAYDOS. Let me respond to you, if I may, if I may be so rude as to interrupt you.

You see, that's such a fundamental thing that should have been done a long time ago, but you had to have a big emergency occur before you did it.

I'm going to be very direct with you. If you have an association, in my humble opinion, that association should be doing something effectively, and it bothers me that such a fundamental thing as what you just mentioned hadn't been in place ten years ago, whether we had OSHA or didn't have OSHA, you see.

Again, it gives substance to those who claim they are paper tigers. I just want you to know that.

Again, I don't want to criticize your group, because I don't have all the facts, but I'm telling you, a lot of people do criticize you, and I have to be, and try and make an attempt to be, impartial up here, but sometimes it gets pretty difficult because the facts belie a conclusion that would say that, gee, that association, by their participating members spending a lot of money, is really doing a service. But when you start analyzing it, they're not doing too much.

Dr. KARRH. One of the things we have learned, Mr. Gaydos, is that we all learn from our past, and I'm sure Congress has, too.

We feel that we should have been aware——

Mr. GAYDOS. That's so fundamental, though.

Dr. KARRH. We should have been aware that something like Bhopal could happen, but we felt, as I mentioned earlier, if we prevented hazards on the plant, that the likelihood of them getting out into the community would not be great. We've learned that that's not true.

We have had some community awareness and emergency response plans in the past as voluntary plans. Shelby County in Tennessee—the Memphis area—for instance, was one of the first and

one of the best. We've had them in other places. Linden, NJ, has had one prior to this initiative coming out and prior to Bhopal.

But, as a result of Bhopal now, we feel this needs to be extended country-wide, anywhere we operate.

Did you want to add to that, Mr. Evans?

Mr. EVANS. I just want to say that years prior to the tragedy at Bhopal, CMA has had, Mr. Chairman, the Chemtrec Program in existence, where transportation emergencies involving chemicals accidents around the country are addressed—Chemtrec provides an emergency number which anyone in the country can call and receive information about the chemical that was involved in the accident.

This program is being extended now to medical emergencies, and even the general information about chemicals, on referral to the companies involved through this same CMA Chemtrec number that's known throughout the country.

So prior to Bhopal, CMA programs were active; post-Bhopal, they are being expanded.

Mr. GAYDOS. I'm going to give you the benefit of the doubt if that's what's happening, but again——

Mr. EVANS. No, but those are facts.

Mr. GAYDOS. I don't want to be argumentative.

Mr. EVANS. No, I'm not trying to be argumentative.

Mr. GAYDOS. Because I appreciate your coming here, but I would like to see the Chemical Manufacturers Association a little more effective possibly and put some teeth in some of their internal programs that they've made. Most of them are very good, but I think the great deficiency is that there is just no way of enforcing them or even voluntarily getting the cooperation.

Dr. KARRH. We have great difficulty putting teeth in, because we really don't have police powers.

Mr. GAYDOS. I understand that.

Dr. KARRH. But what we think we can do—we think that by setting the example——

Mr. GAYDOS. I understand that, but, you see, every time a question is raised, everybody hides behind the association. Oh, we do this, and we do that, and we do this, you see, but when you come down to the nuts and bolts of it, you're not very effective. We have no police, no enforcement powers.

I think it's a good concept. I am just suggesting, and most sincerely suggesting to you, that you might come up with some kind of a procedure. The good things that you are doing—make sure that the good things have some good effects.

Dr. KARRH. And that's what we're trying to do, by having the member companies participate in this and by the larger companies, the companies that have already begun to participate, set the example and encourage the other members to participate.

That's really the only type of power that we have, is to show them that it's good for them and work it that way.

Mr. GAYDOS. I don't profess to know the workings of your internal organization, but I know one thing offhand. I don't know; maybe you're doing it. If you have a program, why don't you make that available to the nonmembers?

You might say, "Well, gee, you have to belong and carry the burden and pay your dues."

Dr. KARRH. That's available to anyone who wants it. We don't have 2,000 members, and we've sent out 2,000 of these books already.

It's available to anyone who would like to have this material and participate in this. We're not just trying to go out to chemical companies; anyone can——

Mr. GAYDOS. So are pamphlets on cancer and changing your diet. Nobody reads them.

Dr. KARRH. I don't think even Congress can force people to read things, Mr. Gaydos.

Mr. GAYDOS. All right. I'm not going to argue with you. I appreciate your coming.

Any more questions, Mr. Hayes?

Mr. HAYES. No further questions.

Mr. GAYDOS. Thank you for coming. I mean that most sincerely.

I'm very happy to say that you should be commended publicly on record, paying your own expenses, and the Government doesn't have to pay for your plane fare to come down here. You're participating, No. 1, as a reliable and responsible association. I think that's the capacity in which you appear here—for the association.

Dr. KARRH. Yes, sir.

Mr. GAYDOS. And one that has made available, I think, most important documentation, and hopefully it will allow us, in our deliberations and study, to be more wise and ultimately to reach a just position, whether we proceed with legislation or not.

I want to thank you for participating in your Government, again.

Dr. KARRH. Thank you very much, Mr. Chairman.

Mr. EVANS. We appreciate your consideration.

Mr. GAYDOS. If we ask some interrogatories, you'll respond, will you?

Dr. KARRH. Yes, sir, we will.

Mr. GAYDOS. Will you tell us how much your company is spending on occupational health and safety in your budget?

Dr. KARRH. I cannot tell you for Du Pont, because we don't break that out separately.

Mr. GAYDOS. You don't?

Dr. KARRH. Du Pont says that occupational safety and health is a cost of doing business. We don't keep those numbers separately.

I can tell you that we have over 120 physicians within the Du Pont Co. in the United States, over 200 registered nurses, we have a staff of 215 professional people at our toxicology laboratory, and we have some 80 industrial hygienists who are responsible for implementing the program.

Mr. GAYDOS. That's why we can't find industrial hygienists; you have them all.

Dr. KARRH. Well, no. I think Monsanto has a large number also.

Mr. EVANS. We're always looking for good ones.

Mr. GAYDOS. What does the association spend every year—just roughly, the figures?

Dr. KARRH. I don't have those budget numbers. I really don't know. It's broken down in departments.

Mr. GAYDOS. Is that proprietary information?

Dr. KARRH. Not to my knowledge.

Mr. EVANS. No. It's a matter of public record, I'm sure. I don't know the number either, but, again, I think the major costs——

Mr. GAYDOS. Do you spend $1 million?

Mr. EVANS. Pardon?

Mr. GAYDOS. Do you spend $1 million?

Mr. EVANS. Easily.

Dr. KARRH. Oh, I'm sure we spend more than that.

Mr. EVANS. Probably five or——

Mr. GAYDOS. How much staff do you have down there in Washington?

Mr. EVANS. About 150.

Mr. GAYDOS. 150.

Mr. EVANS. But the major expense and manpower effort in CMA is from the member companies. It's our representatives that spend the time working with them. The association is the focal point. We are really the CMA's, but they just happen to represent us.

Mr. GAYDOS. How much is the budget?

Dr. KARRH. I don't have the number. We can submit it to you for the record.

Mr. GAYDOS. I'll level with you and be most sincere when I say this to you, that the reason I want to know is, I'd like to look at some figures here, because you are in areas that are quite sensitive to the committee's consideration.

We're talking about public awareness, talking about in-house training programs of all participating members, you see; it's important; and your budget would give us some idea or concept as to how big it is in the country, because we're having some problems as to what to do.

The chemical industry, per se, has been one of the greatest sources of problems we've had and yet has been one of the lesser sources insofar as they've been doing more things than most other industries as a group.

Dr. KARRH. One thing I would caution you, though, is that when you get the budget for CMA, that's not going to tell you the full story, because, as Mr. Evans mentioned, the CMA budget as an association is only for their administration of the health and safety activities within the chemical industry.

CMA is made up of the member company representatives, such as myself, and I work more than 50 percent of my time right now for CMA. Du Pont pays that.

CMA doesn't pay me anything, including my transportation down here, but the member companies pay a tremendous amount of money to have the expertise that those of us who work for the association represent and take to the association to develop these programs.

So if you look at strictly the CMA budget, that may represent less than a quarter of what's really being spent by the industry in this area.

Mr. GAYDOS. Well, I'm sure you'll so indicate on the report that that's a truism, and I think the committee will be able to discern and be able to comprehend what you're doing.

Dr. KARRH. All right, sir.

Mr. GAYDOS. You're not the only organization that does it that way. We do it that way here.

Dr. KARRH. OK.

Mr. GAYDOS. I make staff available, you see, on what we're doing, and I maybe assign two people for 6 months. It appears that you're on maybe a 100-percent basis here.

Dr. KARRH. No, sir. I'm chairman of the Health and Safety Committee of CMA, and, as such, I'm spending about 50 percent of my time working for CMA and 50 percent working for Du Pont.

Mr. GAYDOS. Well, when you change hats, then it's effective; you're 50–50. OK. We understand.

But get that to us, if you can, and we will be sending some interrogatories to you, and would you please respond?

Dr. KARRH. We will.

[The information from CMA follows:]

CMA is basically an organization of company volunteers. Last year, over 1200 professional experts from CMA companies were asked to spend, on average, 20% of their time working on various CMA programs on health, safety, environmental and transportation issues. These experts provide companies, regulatory agencies and the Congress advice on how to produce, use and handle chemical products safely. Staff with special expertise is selected to work with such health and safety issues as hazard communication.

In addition to addressing policy matters, CMA sponsors original research on the health and environmental effects of chemicals. Last year, 34 research and regulatory advocacy programs were underway, funded by a total of $7.5 million. As a matter of CMA policy, upon completion of the studies, all research test results are disclosed to federal agencies overseeing health and environmental matters.

Mr. GAYDOS. Thank you again for appearing.

Dr. KARRH. Thank you very much.

Mr. EVANS. Thank you.

Mr. GAYDOS. Mr. Barnett, there's nothing inherently dangerous about Nabisco or their products. I hope not. No hazardous material there.

Welcome to the committee, Mr Barnett. You go ahead and approach the subject matter to best serve your purposes, and if you'd identify any colleagues with you, I'd appreciate it, for the record.

STATEMENT OF GARY H. BARNETT, MANAGER, SAFETY AND HEALTH, NABISCO BRANDS, INC., ACCOMPANIED BY RANDEL K. JOHNSON, ASSOCIATE DIRECTOR, LOSS PREVENTION AND CONTROL

Mr. BARNETT. Thank you very much.

I hope you can hear me. Yesterday, I developed a very bad cold.

Mr. GAYDOS. You're doing great.

Mr. BARNETT. Thank you.

Good morning, Mr. Chairman and members of the subcommittee.

My name is Gary H. Barnett. I am manager, safety and health, for NABISCO Brands, Inc., and am testifying today on behalf of the National Association of Manufacturers as a member of NAM's OSHA Policy Task Force.

Accompanying me is Randel K. Johnson, associate director, loss prevention and control, for NAM.

The National Association of Manufacturers is a voluntary business association of over 13,000 corporations, large and small, located in every State. Members range in size from the very large to

over 9,000 smaller manufacturing firms, each with an employee base of less than 500.

NAM member companies employ 85 percent of all workers in manufacturing and produce over 80 percent of the Nation's manufactured goods.

NAM is affiliated with an additional 158,000 businesses through its Associations Council and the National Industrial Council.

NAM has been asked by this subcommittee to address the issue of worker right-to-know and, specifically, the effectiveness of OSHA's recently promulgated hazard communication standard.

From the outset, we wish to make clear that NAM fully supports the concept that workers should have meaningful access to, and be trained to understand, information concerning the hazards of the substances with which they work. We believe that the hazard communication standard, once implemented, will effectively accomplish these goals.

NAM participated in the development of the Federal standard throughout the relevant rulemaking proceedings and, on balance, supports the standard which has been promulgated.

Our position during the proceedings was threefold.

First, the regulatory burden placed on the manufacturing community, largely comprised of multistate employers engaged in interstate commerce, would be enormous if every manufacturer who produced or used chemicals was subject to multiple and varying State hazard communication law.

Second, the same end sought by these laws—to afford workers the information they need in dealing with hazardous substances in the workplace—could be effectively met, at lower compliance costs, through a comprehensive, uniform Federal standard which preempted State law.

Third, because many members of the manufacturing community had already instituted programs which effectively communicated meaningful chemical hazard information to their employees, any standard should be written in performance-oriented language which would allow for the continued existence of these proven programs while providing for some expansion thereof as OSHA might view as necessary.

Many aspects of these contentions were ultimately accepted by OSHA for reasons thoroughly supported by the rulemaking record.

The result was a standard which required employers, at manageable costs, in the manufacturing sectors of the economy to provide their employees with all information realistically necessary to understanding the hazards of the chemicals they work with.

It should be emphasized that the standard was issued only after a long, deliberative rulemaking process open to all parties, extending over 9 years.

The final record upon which OSHA based the rule consisted of over 12,000 pages of various comments, testimony, and documents.

Over 4,000 pages of testimony alone were generated during 19 days of public hearings. Both business and labor had ample opportunity to present their positions.

We, therefore, note with dismay efforts by some parties to reopen before this subcommittee issues, such as the adequacy of the standard's hazard determination and labeling provisions, which were re-

viewed, re-reviewed, and again reviewed during this protracted rulemaking process.

The evidence supporting and opposing OSHA's ultimate resolution of these issues has been thoroughly discussed in the agency's promulgation of the standard—48 FR 53280, et seq.—and we do not believe it would be useful or even possible to cover this same ground again before this subcommittee.

The record at this juncture, we believe, must speak for itself. If, in fact, the standard is not supported by the evidence, as some claim, the courts will show little hesitancy in striking it down.

Judicial review is, indeed, the check on the agency's discretion Congress envisioned when it passed the Occupational Safety and Health Act. The standard is, as you know, now under review by the Third Circuit Court of Appeals.

Of course, the effectiveness of the standard as written—that is, in the abstract, and assuming compliance with all provisions—is quite a separate issue from the effectiveness of the standard in practice.

In short, what may on paper be an effective standard, as we believe the OSHA hazard communication standard is, may not be so in reality, and, to employers and employees alike, it is the reality of the workplace which is of greatest importance.

Therefore, the principal focus of our testimony will not be on the merits of the standard in the abstract but, rather, on the actual experience of our members thus far in implementing the standard as its effective dates—November 25, 1985, for chemical manufacturers, and May 25, 1986, for other manufacturers—draw near.

Obviously, the fact the standard is not yet in effect necessarily makes any assessment of its effectiveness, in practice, somewhat speculative. Nevertheless, some observations and predictions can be made.

The purpose of the standard is to ensure that the hazards of all chemicals used within the manufacturing sectors of the economy are evaluated and that the results of these evaluations, along with other relevant information, are transmitted and available to all employees working with those chemicals.

To establish those goals, chemical manufacturers are required to assess the hazards of all chemicals they manufacture and record the results primarily on so-called material safety data sheets, which are transmitted to all purchasers of the products.

All manufacturing employers are required to label hazardous chemicals with appropriate hazard warnings and to train their employees in the hazards of the chemicals.

Although much of the debate over the standard focuses on required methods for assessment of hazards by chemical manufacturers, in fact compliance with every step is critical to the effectiveness of the standard.

The extensive requirements chemical manufacturers must follow in assessing chemicals for hazards are set out in detail in the standard—29 CFR 1910.1200(d).

These requirements have been criticized for allowing manufacturers too much discretion in determining what is or is not hazardous. Therefore, it has been contended, manufacturers will conven-

iently conclude many chemicals are not hazardous and not subject to the standard.

Whatever the merit of this argument in the abstract—and we believe there is none—in practice, our chemical manufacturing members have found that the vast majority of chemicals they produce must be considered hazardous under the terms of the standard.

Further, if there exists any question whatever as to whether a specific chemical is hazardous after following the standard's evaluation procedures, the chemical is usually, nevertheless, considered subject to the provisions of the standard.

Why? Because it is simply administratively easier to do so than to handle those few chemicals which might not be considered subject to the standard in a different manner.

For example, one company produces material safety data sheets for every chemical it produces because it has found most customers now demand MSDSs on every chemical it sells, regardless of its hazardous properties. Further, liability concerns under product liability laws tend to resolve any doubts in favor of inclusion under the standard.

Material safety data sheets form the backbone of the information dissemination goals of the standard. It is the one document which comprehensively summarizes all relevant information concerning hazards of a chemical and accompanies that chemical as it moves from the chemical manufacturer to the chemical user. Its accuracy is vital to the effectiveness of the standard.

Previous testimony before this subcommittee has focused on alleged inaccuracies contained in MSDS's distributed by chemical manufacturers.

It is true that some user manufacturers are having occasional difficulties obtaining what they believe are accurate or complete MSDS's in the sense that they fully conform to the requirements of the standard.

This, of course, potentially affects the quality of the information they in turn must supply their employees under the standard and is particularly troublesome in the case of some small manufacturers who may lack the staff to independently evaluate the quality of the MSDS they receive.

Nevertheless, it should be emphasized that rarely is the information omitted of such a nature as to jeopardize the safety and health of workers, and, in any case, we believe that these problems will have largely been corrected by the time the standard becomes effective or shortly thereafter.

The reasons for our optimism are threefold: one, market pressures; two, product liability exposure; and, three, OSHA sanctions.

While the standard states that users of chemicals may rely on the hazard information they receive from those companies from which they purchase chemicals, the reality is that the users are very much concerned with the quality of the information they receive.

Inaccurate or incomplete information will potentially debase their own training programs, render the workplace a less safe place, and possibly raise liability costs associated with workplace injuries and illnesses.

Users will therefore search for, and purchase from, suppliers—usually the chemical manufacturer—who will provide complete MSDS's. This, quite obviously, will influence suppliers of the chemical to, in turn, develop MSDS's which conform to the standard. This, it should be emphasized, is not a hypothetical theory; it is occurring in the marketplace today.

It is also clear that our members involved in the manufacture of hazardous chemicals and thus, under the standard, the development of MSDS's, are extremely cognizant of the liability problems which could arise from incomplete information in an MSDS which arguably led to a worker's injury.

They, therefore, recognize that corporate caution and good sense require that every feasible effort be made to ensure that the MSDS they produce fully conform with the standard's requirements.

Further, OSHA sanctions are available for manufacturers who fail to provide complete MSDS's. Although final enforcement guidelines of the agency have not yet been issued, the standard, like any OSHA standard, imposes certain requirements. One of these is to produce MSDS's which conform to the standard. Failure to do so will be penalized by the sanctions set out in the OSHA Act.

Finally, companies which are having difficulty obtaining what they consider to be complete MSDS's will be able to turn to commercial suppliers which market and warrant MSDS's on many chemicals.

In sum, we acknowledge that some MSDS's entering the stream of commerce do not conform to the requirements of the standard and thus could be considered incomplete. These are, however, the exception to the rule and, in any case, are in the process of being remedied.

To exemplify this fact, if the subcommittee so desires, we would be glad to submit for the record countless MSDS's which would be considered accurate and complete by any definition.

For the nonchemical manufacturers covered by the standard, the training requirements are perhaps the most burdensome. Yet, because they are critical to effectuating the purpose of the standard—dissemination of the hazard information to workers—it is an expense which our members quite willingly accept.

Masses of information—and the standard demands much—is worthless to a worker who is not instructed in its meaning and in its specific applicability to his or her work. In this regard, it should be emphasized that the minimum training requirements set out in the standard—20 CFR 1910.1200(h)—are far from inconsequential.

Previous testimony before this subcommittee has suggested that a brief encounter between a worker and a foreman on the plant floor might satisfy the requirements. We categorically state that, with the rare possible exception of a plant using no hazardous chemicals, this suggestion bears no relation to reality.

Indeed, the training programs envisioned by our members involve lectures, audiovisual programs, handouts, and a host of other educational tools in order to meet the requirements of the standard.

One company estimates that every employee will receive at least 6 to 8 hours of training directly attributable to the standard. This estimate, of course, does not include development time associated

with the training, such as preparation of the program, and training division, plant, and corporate personnel who, in turn, train the hourly workers.

Another company estimates that it will spend per employee, on training alone, an amount far in excess of OSHA's $43 per employee estimate for total compliance costs imposed by the standard, 48 FR 53327.

None of this is surprising in view of the fact many plants handle hundreds of hazardous chemicals, each of which requires attention under a training program which will meet the stringent requirements of the standard.

In summary, we acknowledge the need for workers to have access to meaningful information on the hazardous chemicals they work with and believe that the provisions of the hazard communication standard will ensure this result.

Of course, problems have arisen as companies have begun to develop workplace practices to come into compliance with the standard. This is only to be expected as a new standard nears its effective date and is surely not unique to the hazard communication standard. Further, we believe these problems can and will be resolved in the near future.

In any case, it seems reasonable to suggest that the standard be tested, before the courts and in practice, before it is discarded or amended.

If the standard is defective in the sense it is not supported by the record, the courts will strike it down. If it proves to be defective in practice, it must be revised. But let's give this standard a chance to work and, at some point in the future, again evaluate its effectiveness when we have concrete evidence to do so.

NAM suggests that oversight hearings again be held in the future at a reasonable time after the standard becomes effective. We would be pleased to participate in any such hearings.

Thank you.

[The prepared statement of Mr. Barnett follows:]

PREPARED STATEMENT OF GARY H. BARNETT, MANAGER, SAFETY AND HEALTH, NABISCO BRANDS, INC., ON BEHALF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS

SUMMARY

- NAM supports the concept that workers should have meaningful access to, and be trained to understand information concerning, the hazards of the chemical substances they work with. We believe OSHA's hazard communication standard achieves these goals in a manageable, efficient, and cost-effective manner.

- It is neither worthwhile or possible to redebate before the subcommittee the merits of the standard in the abstract. The extensive rulemaking record must speak for itself; if, indeed, the standard is not supported by the record, it will be struck down in the courts.

- Because the standard is not yet in effect, it is difficult to judge the standard's effectiveness in practice. Nevertheless, some observations can be made:

  -- The vast majority of chemicals in the workplace will be considered hazardous under the standard.

  -- There are, currently, some difficulties obtaining material safety data sheets which fully conform to the requirements of the standard. However, it is likely this problem will be resolved by the time the standard is in effect or shortly thereafter.

  -- The training requirements of the standard are necessarily extensive and costly, but are in the process of being complied with by industry.

TESTIMONY OF

GARY H. BARNETT
MANAGER, SAFETY AND HEALTH
NABISCO BRANDS, INC.

ON BEHALF OF

THE NATIONAL ASSOCIATION OF MANUFACTURERS

ON

OSHA'S HAZARD COMMUNICATION STANDARD

BEFORE THE

COMMITTEE ON EDUCATION AND LABOR
SUBCOMMITTEE ON HEALTH AND SAFETY
UNITED STATES HOUSE OF REPRESENTATIVES

MAY 9, 1985

Good morning, Mr. Chairman and members of the subcommittee. My name is Gary H. Barnett. I am Manager, Safety and Health, for Nabisco Brands, Inc., and am testifying today on behalf of the National Association of Manufacturers as a member of NAM's OSHA Policy Task Force. Accompanying me is Randel K. Johnson, Associate Director, Loss Prevention and Control for NAM.

The National Association of Manufacturers is a voluntary business association of over 13,000 corporations, large and small, located in every state. Members range in size from the very large to over 9,000 smaller manufacturing firms, each with an employee base of less than 500. NAM member companies employ 85 percent of all workers in manufacturing and produce over 80 percent of the nation's manufactured goods. NAM is

affiliated with an additional 158,000 businesses through its Associations Council and the National Industrial Council.

NAM has been asked by this subcommittee to address the issue of worker right-to-know and, specifically, the effectiveness of OSHA's recently promulgated hazard communication standard. From the outset, we wish to make clear that NAM fully supports the concept that workers should have meaningful access to, and be trained to understand, information concerning the hazards of the substances with which they work. We believe that the hazard communication standard, once implemented, will effectively accomplish these goals.

NAM participated in the development of the federal standard throughout the relevant rulemaking proceedings and, on balance, supports the standard which has been promulgated. Our position during the proceedings was three-fold. First, the regulatory burden placed on the manufacturing community, largely comprised of multistate employers engaged in interstate commerce, would be enormous if every manufacturer who produced or used chemicals was subject to multiple, and varying, state hazard communication law. Second, the same end sought by these laws--to afford workers the information they need in dealing with hazardous substances in the workplace--could be effectively met, at lower compliance costs, through a comprehensive, uniform federal standard which preempted state law. Third, because many members of the manufacturing community had already instituted programs which effectively communicated meaningful chemical hazard information to their employees, any standard should be

written in performance oriented language which would allow for the continued existence of these proven programs while providing for some expansion thereof as OSHA might view as necessary. Many aspects of these contentions were ultimately accepted by OSHA for reasons thoroughly suppported by the rulemaking record. The result was a standard which required employers, at manageable costs, in the manufacturing sectors of the economy to provide their employees with all information realistically necessary to understanding the hazards of the chemicals they work with.

It should be emphasized that the standard was issued only after a long, deliberative rulemaking process, open to all parties, extending over nine years. The final record upon which OSHA based the rule consisted of over 12,000 pages of various comments, testimony and documents. Over 4,000 pages of testimony alone were generated during nineteen days of public hearings. Both business and labor had ample opportunity to present their positions. We, therefore, note with dismay efforts by some parties to reopen before this subcommittee issues, such as the adequacy of the standard's hazard determination and labeling provisions, which were reviewed, re-reviewed, and again reviewed during this protracted rulemaking process. The evidence supporting and opposing OSHA's ultimate resolution of these issues has been thoroughly discussed in the agency's promulgation of the standard (48 FR 53280, et seq.) and we do not believe it would be useful, or even possible, to cover this same ground again before this subcommittee. The record, at this juncture, we believe must speak for itself. If, in fact, the standard is not supported by the evidence, as some claim, the courts will show little hesitancy in striking it down. Judicial review is, indeed, the check on the agency's discretion

Congress envisioned when it passed the Occupational Safety and Health Act. See section 6(f) of the Act. The standard, is, as you know, now under review by the Third Circuit Court of Appeals.

Of course, the effectiveness of the standard as written, that is in the abstract, and assuming compliance with all provisions, is quite a separate issue than the effectiveness of the standard in practice. In short, what may on paper be an effective standard, as we believe the OSHA hazard communication standard is, may not be so in reality. And, to employers and employees alike, it is the reality of the workplace which is of greatest importance.

Therefore, the principle focus of our testimony will not be on the merits of the standard in the abstract, but rather on the actual experience of our members thus far in implementing the standard as its effective dates (November 25, 1985 for chemical manufacturers and May 25, 1986 for other manufacturers) draw near. Obviously, the fact the standard is not yet in effect necessarily makes any assessment of its effectiveness in practice somewhat speculative. Nevertheless, some observations and predictions can be made.

The purpose of the standard is to ensure that the hazards of all chemicals used within the manufacturing sectors of the economy are evaluated and that the results of these evaluations, along with other relevant information, are transmitted and available to all employees working with those chemicals. To accomplish these goals, chemical manufacturers are required to assess the hazards of all chemicals they

manufacturer and record the results, primarily on so-called material safety data sheets (MSDS), which are transmitted to all purchasers of the products. All manufacturing employers are required to label hazardous chemicals with appropriate hazard warnings and to train their employees in the hazards of the chemicals. Although much of the debate over the standard focuses on required methods for assessment of hazards by chemical manufacturers, in fact compliance with every step is critical to the effectiveness of the standard.

The extensive requirements chemical manufacturers must follow in assessing chemicals for hazards are set out in detail in the standard (29 CFR 1910.1200(d)). These requirements have been criticized for allowing manufacturers too much discretion in determining what is or is not hazardous; therefore, it has been contended, manufacturers will conveniently conclude many chemicals are non-hazardous and not subject to the standard. Whatever the merit of this argument in the abstract (and we believe there is none), in practice our chemical manufacturing members have found that the vast majority of chemicals they produce must be considered "hazardous" under the terms of the standard. Further, if there exists any question whatever as to whether a specific chemical is hazardous after following the standard's evaluation procedures, the chemical is usually, nevertheless, considered subject to the provisions of the standard. Why? Because it is simply administratively easier to do so than to handle those few chemicals which might not be considered subject to the standard in a different manner. For example, one company produces material safety data sheets for every chemical it produces because it has found most customers now demand MSDS on every chemical it sells regardless

of its hazardous properties. Further, liability concerns under product liability laws tend to resolve any doubts in favor of inclusion under the standard.

Material safety data sheets form the backbone of the information dissemination goals of the standard. It is the one document which comprehensively summarizes all relevant information concerning hazards of a chemical and accompanies that chemical as it moves from chemical manufacturer to chemical user. Its accuracy is vital to the effectiveness of the standard.

Previous testimony before this subcommittee has focused on alleged inaccuracies contained in MSDS distributed by chemical manufacturers. It is true that some user manufacturers are having occasional difficulties obtaining what they believe are accurate or complete MSDS in the sense that they fully conform to the requirements of the standard. This, of course, potentially affects the quality of the information they in turn must supply their employees under the standard and is particularly troublesome in the case of some small manufacturers who may lack the staff to independently evaluate the quality of the MSDS they receive. Nevertheless, it should be emphasized that rarely is the information omitted of such a nature as to jeopardize the safety and health of workers and, in any case, we believe that these problems will have largely been corrected by the time the standard becomes effective or shortly thereafter. The reasons for our optimism are threefold: 1) Market pressures; 2) product liability exposure, and 3) OSHA sanctions.

While the standard states that users of chemicals may rely on the hazard information they receive from those companies from which they purchase chemicals, the reality is that users are very much concerned with the quality of the information they receive. Inaccurate or incomplete information will potentially debase their own training programs, render the workplace a less safe place, and possibly raise liability costs associated with workplace injuries and illnesses. Users will, therefore, search for, and purchase from, suppliers (usually the chemical manufacturer) who will provide complete MSDS. This, quite obviously, will influence suppliers of the chemical to, in turn, develop MSDS which conform to the standard. This, it should be emphasized, is not a hypothetical theory; it is occuring in the marketplace today.

It is also clear that our members involved in the manufacture of hazardous chemicals and thus, under the standard, the development of MSDS, are extremely cognizant of the liability problems which could arise from incomplete information in an MSDS which arguably led to a worker's injury. They, therefore, recognize that corporate caution and good sense require that every feasible effort be made to ensure that the MSDS they produce fully conform with the standard's requirements.

Further, OSHA sanctions are available for manufacturers who fail to provide complete MSDS. Although final enforcement guidelines of the agency have not yet been issued, the standard, like any OSHA standard, imposes certain requirements. One of these is to produce MSDS which conform to the standard. Failure to do so will be penalized by the sanctions set out in the OSH Act.

Finally, companies which are having difficulty obtaining what they consider to be complete MSDS will be able to turn to commercial suppliers which market (and warrant) MSDS on many chemicals.

In sum, we acknowledge that some MSDS entering the stream of commerce do not conform to the requirements of the standard and thus could be considered incomplete. These are, however, the exception to the rule, and, in any case, are in the process of being remedied. To exemplify this fact, if the subcommittee so desires, we will be glad to submit for the record countless MSDS which would be considered accurate and complete by any definition.

For the non-chemical manufacturers covered by the standard, the training requirements are perhaps the most burdensome. Yet, because they are critical to effectuating the purpose of the standard--dissemination of hazard information to workers--it is an expense which our members quite willingly accept. Masses of information--and the standard demands much--is worthless to a worker who is not instructed in its meaning and in its specific applicability to his or her work.

In this regard, it should be emphasized that the minimum training requirements set out in the standard (20 CFR 1910.1200 (h)) are far from inconsequential. Previous testimony before this subcommittee has suggested that a brief encounter between a worker and a foreman on the plant floor might satisfy the requirements. We categorically state that, with the rare possible exception of a plant using no hazardous chemicals,

this suggestion bears no relation to reality. Indeed, the training programs envisioned by our members involve lectures, audio-visual programs, handouts, and a host of other educational tools in order to meet the requirements of the standard. One company estimates that every employee will receive at least six to eight hours of training directly attributable to the standard. This estimate, of course, does not include developmental time associated with the training, such as preparation of the program and training corporate personnel, who, in turn, train the hourly workers. Another company estimates that it will spend per employee, on training alone, an amount far in excess of OSHA's $43.00 per employee estimate for total compliance costs imposed by the standard (48 FR 53327). None of this is surprising in view of the fact many plants handle hundreds of hazardous chemicals, each of which requires attention under a training program which will meet the stringent requirements of the standard.

In summary, we acknowledge the need for workers to have access to meaningful information on the hazardous chemicals they work with and believe that the provisions of the hazard communication standard will ensure this result. Of course, problems have arisen as companies have begun to develop workplace practices to come into compliance with the standard. This is only to be expected as a new standard nears its effective date, and is surely not unique to the hazard communication standard. Further, we believe these problems can and will be resolved in the near future.

In any case, it seems reasonable to suggest that the standard be tested, before the courts and in practice, before it is discarded or amended. If the standard is defective in the sense it is not supported by the record, the courts will strike it down. If it proves to be defective in practice, it must be revised. But let's give this standard a chance to work, and at some point in the future again evaluate its effectiveness when we have concrete evidence to do so. NAM suggests that oversight hearings again be held in the future, at a reasonable time after the standard becomes effective; we would be pleased to participate in any such hearings.

Thank you.

Mr. GAYDOS. Is there any more formal testimony?

Mr. JOHNSON. No, sir.

Mr. GAYDOS. Could you explain—when you were giving your testimony, you mentioned that some chemical users do purchase material safety data sheets.

Mr. BARNETT. They do purchase material safety data sheets?

Mr. GAYDOS. Yes.

Mr. BARNETT. There are some companies today that do market material safety data sheets that can be purchased. There are a number of them that have computer systems where you can go on line with those systems. Offhand, I can't think of the names, but I could get them for you, if you wish.

There are companies, like General Electric, that do market material safety data sheets.

Mr. GAYDOS. Why would they be available in such quantity and for such diversified use?

Mr. BARNETT. I'm sorry, I didn't——

Mr. GAYDOS. Why would they be available in that end? I had the concept that it was attached to, and became part of, the chemical, regardless of what form it was in.

Mr. BARNETT. Normally the material——

Mr. GAYDOS. Can I buy one?

Mr. BARNETT. Yes. You can buy a whole set, if you wish.

Mr. GAYDOS. A whole set?

Mr. BARNETT. Yes.

This has nothing to do with buying a particular substance from General Electric, but if you wanted to have a supply of material safety data sheets on a wide range of chemical substances, they do market it. It has nothing to do with a user going to General Electric and saying, "I want to buy some chemical substance from you, and I have to buy your material safety data sheets." That's not what I'm talking about.

Mr. GAYDOS. I see.

Mr. BARNETT. The material safety data sheet in that case, I would expect, would come along with the product.

Mr. GAYDOS. All right.

You mentioned that you've been experiencing, or you foresee, some difficulty in getting material safety data sheets which conform to the standard. Can you give us some specific, particular kinds of problems that you think we will experience or are experiencing?

Mr. BARNETT. I can speak for my company. Back in 1977, we started inventorying our chemicals, and we did go out and get material safety data sheets, and, over the years, we did find some were not as complete as we would like, but the trend is that they are getting better, and the material safety data sheets that are available today that we are getting are far superior to those much earlier.

Mr. GAYDOS. How long have these data sheets been available, to your knowledge?

Mr. BARNETT. I don't know. I know that we started a very active campaign in my company in 1977.

Mr. GAYDOS. And it took that form?

Mr. BARNETT. There were various forms that the material safety data sheets were in.

Mr. GAYDOS. Were those the ones that we had testimony before the committee on, where some were incomplete and some were voluntary?

Mr. BARNETT. I don't know. I can't comment on those.

Mr. GAYDOS. It has been implied by others that there have been occasions when more than one material safety data sheet has arrived with a shipment of a substance and that there have been differences, sometimes major ones, between the various data sheets.

How do chemical users handle this kind of a problem? What would you do, or what would you have as a suggestion? Do you think there's any authenticity to that claim?

Mr. BARNETT. It's possible, I guess.

Mr. GAYDOS. How would it originate? How would something like that occur—that two different——

Mr. BARNETT. That two different material safety data sheets from the same supplier for the same chemical——

Mr. GAYDOS. I have to presume they're coming from the same place.

Mr. BARNETT. I don't know.

Mr. GAYDOS. All right.

Mr. BARNETT. I know that periodically we will get updated material safety data sheets on materials that we had purchased.

Mr. GAYDOS. Updated?

Mr. BARNETT. Yes.

Mr. GAYDOS. You don't experience that as a problem, do you?

Mr. BARNETT. No.

Mr. GAYDOS. Labor has been extensively critical that training programs developed by employers fall short of that necessary to provide adequate information to the workers.

Can you describe one of the training programs being developed by your company's employees, if there are any, and how you do it? Do you see a problem—experience a problem?

Mr. BARNETT. We think that, overall, the training is a very important element, and, as I said, in my company, we started our inventory in getting material safety data sheets in 1977, reviewing those data sheets, putting them together in a manual, and getting them out to our manufacturing sites.

It just so happens that, by the time we were getting started on that, it coincided with some of the State right-to-know laws, and we concentrated on those States.

Our training, which is an ongoing activity, constantly being refined—we've had training conferences, various visual aids that we have put together. Currently we are reviewing new visual aids specifically addressing hazardous communications. We are anticipating more meetings with our employees.

We require that our equipment—containers in the plants—be properly labeled. We have company safety and loss control standards. We issue bulletins. We have ongoing monitoring programs in our plants—safety audits, if you will—and we are looking at expanding, and will be expanding, communication of the hazardous communication information to employees through a variety of visual aids as well as meetings.

Mr. GAYDOS. Generally, have you found all these things required by the standard a burden, or do you think it was, in all fairness, something to expect, and it's good that it has occurred?

Mr. BARNETT. I think that it's good that it has occurred.

We have always taken the position that we do want our employees to know the chemicals that they're working with and the proper safety precautions to be taken. I think the members in the association feel that way as well.

Mr. GAYDOS. I think you are very fair in stating that maybe the standard is insufficient; you don't know; but I then gather it's your position, let's stop, put it into effect, take a look at it and analyze it, and if it needs some fine-tuning, let's do it.

Mr. BARNETT. Exactly.

Mr. GAYDOS. I don't want to belabor you any more, because I know you have some problems, but you've done very well.

Mr. BARNETT. Thank you.

Mr. GAYDOS. Dottie, do you or counsel have specific questions you want to put on record at this time?

Ms. STRUNK. No, thank you.

Mr. MORGRET. No, thank you.

Mr. GAYDOS. I want to thank you for a very practical statement—very clear and concise. It's probably one of the more practical statements we've had.

Mr. BARNETT. Thank you very much.

Mr. GAYDOS. Thank you for your appearance, and if we do have specific questions, would you be so kind as to respond—either to the majority or the minority—to any written interrogatories?

Mr. BARNETT. Yes, we would.

Mr. GAYDOS. I'm very sorry we inconvenienced you, and I hope we didn't cause that laryngitis.

Mr. BARNETT. No inconvenience. It was our pleasure. Thank you.

Mr. GAYDOS. But you sound pretty good.

Mr. BARNETT. Thank you.

Mr. GAYDOS. Thank you very much.

I want to thank all those for appearing before the subcommittee and responding to the questions.

It's quite evident there are areas of agreement between management and labor with respect to the hazard communication standard, especially with regard to expanding the coverage to employees in nonmanufacturing industries in which chemical use is highly prevalent.

It should be noted here that the National Advisory Council on Occupational Safety and Health, at the request of OSHA Director Bob Roland, is looking into ways of doing just that.

There are also areas of disagreement. I hope that it will be possible to have in place a standard that will provide maximum information for workers to ensure their safety while handling toxic substances and, at the same time, not overly burden our industries or industrial complex.

On that point, our international competition is getting so sensitive that it's becoming more and more of a problem, and I can understand that.

I keep wondering about things coming into the country that are manufactured in the most obnoxious type of circumstances, and

they're competing, and nobody's putting an extra tag on them; it's unbelievable.

In my own mind, I believe worker safety and health has to be the primary consideration, for the many obvious reasons.

This concludes today's hearing. Our next hearing will be on May 22, at 9:30 a.m., in this room, on toxic waste sites and applying standards for workers at those sites.

Thank you very much, and thanks for your appearance.

Mr. BARNETT. Our pleasure. Thank you.

[Whereupon, at 11:30 a.m., the subcommittee was adjourned.]

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